Usenet Newsgroup Archive: rec.radio.amateur.antenna

2013

These Usenet messages were preserved as a plain-text archive. This PDF was generated by Digital Library of Amateur Radio & Communications from the source text file in 2026.

Date span: 2013-01-01 through 2013-06-15

Source text: rec.radio.amateur.antenna.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 427

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 01:09:35 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <kHqEs.31373$as6.22975@newsfe09.iad>
Source record: 424

Hi
I know it is a bit off topic but I know a lot of knowledge here and the boating groups seem finished.

I have three batteries for my boats, two are the larger sized 12volt deep cycle, the heavier ones (about 50 lbs) about 700 something amp. Nautalis from Canadian Tire, the other is the regular size deep cycle 12volt (about 30lb) .
The battery charger is the Canadian tire 2amp/10amp automatic charger. Has setting for deepcycle batteries.

Because both those heavy batteries (4 years old) were drained very low, almost dead it took about a week to charge one of them before the green light came on on the charger. They always measured 12v and always kept fluid full. Both batteries charged fully in about a week with that charger (about 5 days each) at 10 amps. Sometimes I switch the charger to 2 amps (high power rates).

The other regular sized boat battery (for my 70hp outboard) is about 5 years, always shows 12v and full, and charged up np and green light came on.

I put all three on the shelf in the garage here in Ontario and tapped the batteries together in parellel and put the charger back on the center battery and haven't seen the green light come on that charger now for over a week. I keep it on 10amps overnight because cheaper rate, then switch to 2 amps for the day, then weekends 10amps solid.

Why no green light? Was green light when individually charged them.

I know the smaller battery is much less amps than the other two (pair) batteries.

My objective was to bring them all up to charge (green light) then keep them in storage in the garage with the one amp charger I have from Canadian tire and keep it there all winter on the 1amp charger 24,7.

Any ideas why the batch of them aren't coming to green light? And is that a good storage idea?

Thanks for any ideas,,

73s

2. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 06:06:40 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <gsu4e81jbmkfh7pm6ucq117upguqa406kv@4ax.com>
Source record: 425

On Mon, 31 Dec 2012 20:09:35 -0500, "Tom" <abraa@cadabraa.ca> wrote:

>Any ideas why the batch of them aren't coming to green light?

Nope, no ideas.
Could I trouble you for the make and model of the battery charger?

<http://www.batteryuniversity.com>
<http://batteryuniversity.com/learn/article/charging_the_lead_acid_battery>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

3. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 06:25:19 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <8bv4e8tfa9qudpbeb9q91tph60e1a3usb8@4ax.com>
Source record: 426

On Mon, 31 Dec 2012 22:06:40 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>On Mon, 31 Dec 2012 20:09:35 -0500, "Tom" <abraa@cadabraa.ca> wrote:
>
>>Any ideas why the batch of them aren't coming to green light?
>
>Nope, no ideas.
>Could I trouble you for the make and model of the battery charger?

Found your charger:
<http://www.canadiantire.com/AST/browse/4/Auto/3/Batteries/BatteryChargers/PRDOVR~0111503P
/MotoMaster+10%2B2A+Automatic+Battery+Charger.jsp?locale=en>
Where do you have the switch set?
Conventional or AGM-Deep Cycle?
Does it match the type of battery? If you're not sure, the make and
model number of the batteries please?

><http://www.batteryuniversity.com>
><http://batteryuniversity.com/learn/article/charging_the_lead_acid_battery>

I don't trust that type of cheapo battery charger.
<http://802.11junk.com/jeffl/pics/drivel/slides/dead-battery-chargers.html>
All but one in the picture were either blown, or have successfully
killed at least one battery. One boiled all the water out of a
battery. They're all junk. I took a few apart to see what was
inside, but all eventually went to the recyclers. Your Canadian Tire
charger is probably something similar, except in a metal case. Buy
something with a microprocessor, temperature compensation, battery
temp sensor, multi-stage charging, automatic (so you can leave it
connected) etc. Plan on burning at least $200. You'll probably save
that much by not killing batteries.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

4. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 06:50:12 UTC
From: David Ryeburn <david_ryeburn@telus.netz>
Message-ID: <david_ryeburn-36603C.22501231122012@news.eternal-september.org>
Source record: 427

In article <kHqEs.31373$as6.22975@newsfe09.iad>,
"Tom" <abraa@cadabraa.ca> wrote:

> I put all three on the shelf in the garage here in Ontario and tapped the
> batteries together in parellel and put the charger back on the center
> battery and haven't seen the green light come on that charger now for over a
> week.

It's not a good idea to put lead acid batteries in parallel unless hefty build-out diodes are used in series with each one of them before they are connected in parallel. If the batteries are expected to be discharged during use, the diodes should be arranged to let current flow out of each battery but not into it. If the batteries are expected to be charged during use, the diodes should be arranged to let current flow into each battery but not out of it. The batteries have *EXTREMELY* low internal resistance and there is no chance whatsoever that their internal effective voltages will be absolutely identical. Absent the diodes, whichever battery wants to have a higher terminal voltage will discharge like mad into the others, until all their terminal voltages are the same. Then you will have a badly discharged battery and one or more charged ones, all in parallele. Until then, make sure the wires you use are large, since the current flowing is going to be high. Not a good situation.

Charging batteries in series instead of in parallel has its own problems, but they're not as serious as the problem I have just mentioned. The worst problem with charging N batteries in series is that you need N times as much voltage from the charger as you would have needed charging them one at a time.

David

--
David Ryeburn
david_ryeburn@telus.netz
To send e-mail, change "netz" to "net"

5. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 07:00:03 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1357023601@panix.com>
Source record: 428
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

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Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
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Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

6. Gary Sokolich - 3813

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 10:43:27 UTC
From: Gary Sokolisch <SokolischSpeaks@moonbat.com>
Message-ID: <1nfc94v3jveqg$.19oxj0gu4i930$.dlg@40tude.net>
Source record: 429

3813

W Gary Sokolich
801 Kings Road
Newport Beach, CA 92663-5715
(949) 650-5379
Local PD
949-644-3681

Residence:
1029 S Point View St
Los Angeles CA 90035
(310) 650-5379

and
5309 Victoria Ave., Los Angeles, CA, 90043

http://web.archive.org/web/20080821231423/http://www.tbpe.state.tx.us/da/da022808.htm

TEXAS BOARD OF PROFESSIONAL ENGINEERS
February 28, 2008 Board Meeting Disciplinary Actions

W. Gary Sokolich , Newport Beach, California 嗡碾 File B-29812 - It was alleged that. Sokolich unlawfully offered or attempted to practice engineering in Texas (...) Sokolich chose to end the proceedings by signing a Consent Order that was accepted by the Board to cease and desist from representing himself as an 嗡踝蕭Engineer嗡踝蕭 in Texas, from any and all representations that he can offer or perform engineering services and from the actual practice of engineering in Texas (...) Sokolich was also assessed a $1,360.00 administrative penalty.

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http://articles.latimes.com/1988-04-14/local/me-1922_1_ucla-researcher

A former UCLA employee has agreed to provide copies of his research to the school to settle a lawsuit the university filed against him in 1985, lawyers in the case said.

(...)

The University of California Board of Regents filed a $620,000 lawsuit against Sokolich, accusing him of taking research on the hearing capabilities of animals in June, 1982. Sokolich was dismissed by UCLA (...).

(...)

7. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 15:37:17 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <OoDEs.7696$9N1.621@newsfe13.iad>
Source record: 430

Happy new year

Thanks for the information.

This is the charger I have.

http://reviews.canadiantire.ca/9045/0111567P/motomaster-motomaster-automatic-10-2a-battery-charger-reviews/reviews.htm

I know not the best charger, Can you guys recommend a proper storage procedure for my three deep cycle batteries? Two are the larger sized ones, looks like this one only with 700something amps listed on it. Might be the model before this one. Both mine are 4 years old.

http://www.canadiantire.ca/AST/browse/4/Auto/3/Batteries/MarineBatteries/PRDOVR~0103199P/Group+31+Deep+Cycle+Battery.jsp?locale=en

The third battery is a regular sized 12v deep cycle, smaller than the two big ones, regular sized.

Hope you gents can recommend a charging or storage procedure for our short Ontario winter. I prefer to keep them in the garage, not heated but convenient.

Should I simply bring each up to green light (charger stops charging) then store them and do this once a month? Canadian Tire stores say to do this. Or should I keep them in parellel, after fully charged and keep the 1amp charger on constant. Canadian tire also recommends this. I don't think they are as knowledgable as you folks, I know that 100%. That is why I am asking you folks your opinions and I appreciate it.

73s, best regards and happy new year

"David Ryeburn" <david_ryeburn@telus.netz> wrote in message news:david_ryeburn-36603C.22501231122012@news.eternal-september.org...
> In article <kHqEs.31373$as6.22975@newsfe09.iad>,
> "Tom" <abraa@cadabraa.ca> wrote:
>
>> I put all three on the shelf in the garage here in Ontario and tapped the
>> batteries together in parellel and put the charger back on the center
>> battery and haven't seen the green light come on that charger now for
>> over a
>> week.
>
> It's not a good idea to put lead acid batteries in parallel unless hefty
> build-out diodes are used in series with each one of them before they
> are connected in parallel. If the batteries are expected to be

> discharged during use, the diodes should be arranged to let current flow
> out of each battery but not into it. If the batteries are expected to be
> charged during use, the diodes should be arranged to let current flow
> into each battery but not out of it. The batteries have *EXTREMELY* low
> internal resistance and there is no chance whatsoever that their
> internal effective voltages will be absolutely identical. Absent the
> diodes, whichever battery wants to have a higher terminal voltage will
> discharge like mad into the others, until all their terminal voltages
> are the same. Then you will have a badly discharged battery and one or
> more charged ones, all in parallele. Until then, make sure the wires you
> use are large, since the current flowing is going to be high. Not a good
> situation.
>
> Charging batteries in series instead of in parallel has its own
> problems, but they're not as serious as the problem I have just
> mentioned. The worst problem with charging N batteries in series is that
> you need N times as much voltage from the charger as you would have
> needed charging them one at a time.
>
> David
>
> --
> David Ryeburn
> david_ryeburn@telus.netz
> To send e-mail, change "netz" to "net"
>

8. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 16:39:24 UTC
From: Bill Ogden <billogden@optonline.net>
Message-ID: <50e3113e$0$1226$607ed4bc@cv.net>
Source record: 431

FWIW, I store batteries in my basement over the winter. About every two weeks I place a small "half-way intelligent" charger on each, in turn, and bring each up to "full". I think your parallel charging is not a good idea and may have partly destroyed one of the batteries. Diode protection (for charging in parallel) might work, but it will probably change the voltages involved and may confuse an intelligent charger. I suggest individual charging.

Bill
W2WO

9. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 16:52:00 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <RuEEs.36974$sm1.32411@newsfe22.iad>
Source record: 432

Hi
Thanks for the tips,

I was worried about storing in the basement because of the fumes that come from them. I figured when charging and their bubbling that adds a lot of chemical fumes into the home. Is that a concern?

Going to unplug that system I have in the garage now, I hope I haven't done any damage and was wondering why each battery came to green light individually but when put in parellel it hasn't came to greenlight for over a week. I hope I haven't destroyed them. And even though those chaps at Canadian Tire recommend this, I understand they haven't an engineering degree in marine batteries, but thankful I get opinions from this group, thanks for the tips,

73s

"Bill Ogden" <billogden@optonline.net> wrote in message
news:50e3113e$0$1226$607ed4bc@cv.net...
> FWIW, I store batteries in my basement over the winter. About every two
> weeks I place a small "half-way intelligent" charger on each, in turn, and
> bring each up to "full". I think your parallel charging is not a good
> idea and may have partly destroyed one of the batteries. Diode protection
> (for charging in parallel) might work, but it will probably change the
> voltages involved and may confuse an intelligent charger. I suggest
> individual charging.
>
> Bill
> W2WO
>
>

10. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 18:53:18 UTC
From: ogrowup@webtv.net
Message-ID: <11909-50E3309E-140@storefull-3171.bay.webtv.net>
Source record: 433

Re: Battery charging???

Group: rec.radio.amateur.antenna Date: Tue, Jan 1, 2013, 11:52am From:
abraa@cadabraa.ca (Tom)
Hi
Thanks for the tips,
I was worried about storing in the basement because of the fumes that
come from them. I figured when charging and their bubbling that adds a
lot of chemical fumes into the home. Is that a concern?
Going to unplug that system I have in the garage now, I hope I haven't
done any damage and was wondering why each battery came to green light
individually but when put in parellel it hasn't came to greenlight for
over a week. I hope I haven't destroyed them. And even though those
chaps at Canadian Tire recommend this, I understand they haven't an
engineering degree in marine batteries, but thankful I get opinions from
this group, thanks for the tips,
73s
"Bill Ogden" <billogden@optonline.net> wrote in message
news:50e3113e$0$1226$607ed4bc@cv.net...
FWIW, I store batteries in my basement over the winter. About every two
weeks I place a small "half-way intelligent" charger on each, in turn,
and bring each up to "full". I think your parallel charging is not a
good idea and may have partly destroyed one of the batteries. Diode
protection (for charging in parallel) might work, but it will probably
change the voltages involved and may confuse an intelligent charger. I
suggest individual charging.
Bill
W2WO

==========

That bubling is probably hydrogen gas, which is basicaly nontoxic but
explosive. If you have ANY source of ignition in your basement, I would
be VERY concerned!
You need ventiliation to get the hydrogen out.

--
"A man who can own a gun is a citizen. A man who cannot own a gun is a
subject."--

Unknown

11. Stacking Winegard HD-6065P antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 22:07:45 UTC
From: Paul Pomes <paul@pomes.org>
Message-ID: <34657481-cb7e-4962-8f22-d621fc4a163f@googlegroups.com>
Source record: 434

I'm looking for a source for a second Winegard HD-6065P antenna that I can stack with my existing one to increase the FM gain. At the moment I can pull in most Mt Wilson stations in San Diego, but only in mono. I realize an amplifier would likely do the job easier, but I think this would be a cool thing to do.

Cheers!
Paul Pomes, DVM

12. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 22:17:54 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <98n6e8tojnp6l0fsurv4q46t15sp36ad5i@4ax.com>
Source record: 435

On Tue, 1 Jan 2013 11:52:00 -0500, "Tom" <abraa@cadabraa.ca> wrote:

>I was worried about storing in the basement because of the fumes that come
>from them. I figured when charging and their bubbling that adds a lot of
>chemical fumes into the home. Is that a concern?

Yes, it's a concern. I've done it the wrong way a few times. The
result was a battery box with severely corroded hardware. That's why
battery boxes are usually plastic or wood. No explosions because the
box is vented to the outside air. Hydrogen is lighter than air and
will rise easily out of a vented box.

Our radio club's battery "pile":
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/slides/Batteries.html>

This might give you some ideas:
<https://www.google.com/search?tbm=isch&q=battery+box>

You might also get some hints from the alternative energy groups that
often store their batteries in the basement.
<https://homepower.com>
There are various schemes involving filtered battery vent plugs,
manifolds, dryers, and absorbers.

Wooden battery box with vent:
<http://www.oynot.com/battery-box.html>
I'm not thrilled with this method but it probably works:
<http://www.oynot.com/battery-box-venting.html>

Also, I missed the part where you were trying to charge two batteries
in parallel. Don't do that, at least not with your simple charger.
However, if you must do it, there are numerous articles on the
internet on charging batteries in parallel.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

13. Re: Stacking Winegard HD-6065P antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 22:42:38 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <oep6e89do6c9b9o73ec19mnj7n3ucge2r7@4ax.com>
Source record: 436

On Tue, 1 Jan 2013 14:07:45 -0800 (PST), Paul Pomes <paul@pomes.org>
wrote:

>I'm looking for a source for a second Winegard HD-6065P antenna that I can stack with my existing one to increase the FM gain. At the moment I can pull in most Mt Wilson stations in San Diego, but only in mono. I realize an amplifier would likely do the job easier, but I think this would be a cool thing to do.
>
>Cheers!
>Paul Pomes, DVM

If you have lots of lossy coax cable and a typically insensitive
consumer grade receiver, an amplifier might give you 10dB of gain.
A second stacked antenna will give you exactly 3dB gain.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

14. Re: Stacking Winegard HD-6065P antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-01 23:21:43 UTC
From: Channel Jumper <Channel.Jumper.b297758@radiobanter.com>
Message-ID: <Channel.Jumper.b297758@radiobanter.com>
Source record: 437

'Jeff Liebermann[_2_ Wrote:
> ;800247']On Tue, 1 Jan 2013 14:07:45 -0800 (PST), Paul Pomes
> paul@pomes.org
> wrote:
> -
> I'm looking for a source for a second Winegard HD-6065P antenna that I
> can stack with my existing one to increase the FM gain. At the moment I
> can pull in most Mt Wilson stations in San Diego, but only in mono. I
> realize an amplifier would likely do the job easier, but I think this
> would be a cool thing to do.
>
> Cheers!
> Paul Pomes, DVM-
>
> If you have lots of lossy coax cable and a typically insensitive
> consumer grade receiver, an amplifier might give you 10dB of gain.
> A second stacked antenna will give you exactly 3dB gain.
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

I will agree with Jeff to a point, the pre amplifiers only job is to
compensate for line loss.
On 88 - 108 MHz there is not a lot of loss - hence there is not a lot to
be gained by using a preamplifier.
Winegard maintains a web site which can be accessed via internet - what
you need is a antenna with better rejection and more forward gain.

Because you did not post a physical address, there is no way for sure
for me to give you accurate information - because my crystal ball is
broken...

Go to FM Fool.com and post your address and you will get a beam heading
and distance to the transmitters.
It will also show a graph with what is between the transmit and the
receive antenna's...

FM works on the principal of capture effect - hence it will receive the
strongest signals and reject all others.
Your problem might be that you have another station on the same
frequency or close by that is stronger then the signal you desire...

The Winegard 7694 - 7698P antenna's are a very good source for better reception. You might also want to incorporate a good antenna rotor...

--
Channel Jumper

15. HOT SEXY VIDEOS PRESENT MASLA PHOTOS FOR ADULTS

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-03 06:37:32 UTC
From: 866434 <iashjbbxdhvv@gmail.com>
Message-ID: <07e66d81-c904-46ef-adf6-ba085fb39a78@p7g2000pbz.googlegroups.com>
Source record: 438

VERY VERY VERY HOT HOT HOT ONLY HOT
http://acresesandmodels.blogspot.in/2011/06/real-kiss-hot-videos.html

HOT HOT LIP KISS
http://hotvideosfreesee.blogspot.in/2010/06/hot-for-youth.html
SUPER HOT PHOTOS
http://hotvideosfreesee.blogspot.in/2010/06/hot-101.html
YOUTH HOT PHOTOS
http://hotvideosfreesee.blogspot.in/2010/06/hot-lip-kiss-12.html
ONLY HOT HOT
http://hotvideosfreesee.blogspot.in/2010/06/supr-hot-never-seen.html
SUPER HOT NEVER SEEN
http://hotvideosfreesee.blogspot.in/2010/06/supe-r-hot-kiss-op.html
HEROINE LIP KISS
http://hotvideosfreesee.blogspot.in/2010/06/kajal-best-lip-kiss.html

for mopre hot videos
http://allvideosforyouth.blogspot.in/2010/08/super-hot-lip-kiss.html

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java interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/java-interview-questions-and-answe
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http://alljobsandinterviwquestions.blogspot.com/2012/08/oracle-interview-questions-and-ans
wers.html
hardware interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/hardware-interview-questions-and-a
nswers.html
networking interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/networking-interview-questions-and
.html
dotnet interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/dotnet-interview-questions-and-ans
wers.html
c interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/c-interview-questions-and-answers.
html

datawarehousing interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/datawarehousing-interview-questions-and.html
sap interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/sap-interview-questions-and-answers.html

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http://alljobsandinterviwquestions.blogspot.com/2012/08/java-jobs.html
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http://alljobsandinterviwquestions.blogspot.com/2012/08/oracle-jobs.html
sap jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/sap-jobs.html
hardware jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/hardware-jobs.html
networking jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/networking-jobs.html
datawarehousing jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/datawarehousing-jobs.html
GOOGLE ADSENSE
http://alljobsandinterviwquestions.blogspot.com/2012/08/google-adsense.html

16. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-04 12:40:00 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <z4AFs.20773$tK1.3138@newsfe07.iad>
Source record: 439

Thank you fine gentlemen

I certainly learned a lot about recharging deep cycle batteries and lots of great recommendations.

Thanks for all the recommendations and suggestions.

73s

"Jim Higgins" <invalid@invalid.invalid> wrote in message news:8rm6e8pm65mv5tvok53emufshnbmghrlaq@4ax.com...
> On Mon, 31 Dec 2012 20:09:35 -0500, "Tom" <abraa@cadabraa.ca> wrote:
>
>>Hi
>>I know it is a bit off topic but I know a lot of knowledge here and the
>>boating groups seem finished.
>>
>>I have three batteries for my boats, two are the larger sized 12volt deep
>>cycle, the heavier ones (about 50 lbs) about 700 something amp. Nautalis
>>from Canadian Tire, the other is the regular size deep cycle 12volt (about
>>30lb) .
>>The battery charger is the Canadian tire 2amp/10amp automatic charger. Has
>>setting for deepcycle batteries.
>>
>>Because both those heavy batteries (4 years old) were drained very low,
>>almost dead
>
>
> Very deep discharge runs the risk of developing shorts thru the
> separators (glass mats) that can prevent the batteries ever again
> achieving full charge. Such batteries will also not hold a charge.
>
>
>> it took about a week to charge one of them before the green
>>light came on on the charger. They always measured 12v and always kept
>>fluid
>>full. Both batteries charged fully in about a week with that charger
>>(about
>>5 days each) at 10 amps. Sometimes I switch the charger to 2 amps (high
>>power rates).
>
>
> Question... when you say 10 amps and 2 amps, are you referring just to
> the name of the setting or can you confirm that 2 amps and 10 amps of
> current were actually flowing. Does the charger have an ammeter?

>
>
>>The other regular sized boat battery (for my 70hp outboard) is about 5
>>years, always shows 12v and full, and charged up np and green light came
>>on.
>>
>>I put all three on the shelf in the garage here in Ontario and tapped the
>>batteries together in parellel and put the charger back on the center
>>battery and haven't seen the green light come on that charger now for over
>>a
>>week. I keep it on 10amps overnight because cheaper rate, then switch to 2
>>amps for the day, then weekends 10amps solid.
>>
>>Why no green light? Was green light when individually charged them.
>>
>>I know the smaller battery is much less amps than the other two (pair)
>>batteries.
>
> That last bit isn't an issue in and of itself.
>
> What's the temperature in your garage? What's the voltage of the
> batteries with the charger connected and operating? How much charge
> current is flowing? (I'm not asking you for the charge setting, but
> rather for ACTUAL current flow.)
>
>
>>My objective was to bring them all up to charge (green light) then keep
>>them
>>in storage in the garage with the one amp charger I have from Canadian
>>tire
>>and keep it there all winter on the 1amp charger 24,7.
>
> A reasonable goal assuming the 1-amp charger cuts off at a battery
> voltage that doesn't result in excessive gassing, otherwise spring
> will find 3 dried up batteries. It also assumes 1 amp is adequate to
> keep these OLD batteries fully charged. And it assumes the voltage
> this charger is capable of putting out, and the voltage setting within
> it, is adequate for a battery sitting in a COLD garage. You need a
> higher voltage to fully charge and maintain a cold battery.
>
>
>>Any ideas why the batch of them aren't coming to green light? And is that
>>a
>>good storage idea?
>
> Read the above carefully and answer all questions and we'll be closer
> to figuring that out. Do NOT make assumptions about the current that
> is flowing. If you aren't able to read it on a meter, you need to say
> so clearly. When you measure voltages it would be nice to see a
> number to 2 places after the decimal.

>
> One more thing you can do. Disconnect the charger over night, measure
> battery voltage, then reconnect the charger and measure voltage at
> regular intervals of no less than 1 hour for as long as you can. This
> will tell us something about the capabilities of the charger when
> operating in the cold garage. Do this AFTER measuring battery voltage
> on charge (and after extended charging) as requested earlier.
>

17. Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-05 12:02:59 UTC
From: JIMMIE <JIMMIEDEE123@yahoo.com>
Message-ID: <beb915c1-cbf1-4c3a-8e3c-8f981efdc300@googlegroups.com>
Source record: 440

The beer got flowing the other day and some of my friends and I got to BSing about the possibility of transmitting a microwave pulse and reciving it reflected off the moon. Plans are to use a microwave oven magnetron for the transmitter. We were wondering if this would be legal.

18. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-05 12:34:07 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkeg7dv.epj.nomail@xs8.xs4all.nl>
Source record: 441

JIMMIE <JIMMIEDEE123@yahoo.com> wrote:
> The beer got flowing the other day and some of my friends and I got to BSing about the possibility of transmitting a microwave pulse and reciving it reflected off the moon. Plans are to use a microwave oven magnetron for the transmitter. We were wondering if this would be legal.

Radio amateurs do this all the time. In most countries, for it to be
legal you need a radio amateur license.

Today it actually is not very difficult to receive moon bounce reflections,
because we can make very sensitive receivers and detect signals that are
below the noise, using a computer.

However, to do that you need to transmit a signal at a very stable
frequency, so that you know beforehand what will be coming back.
A microwave oven magnetron cannot really do that. It transmits a
big blob of RF at a woblling output frequency, rather than a well
defined frequency.

You also don't need that power, really. It is better to spend your
effort on a good antenna, because it helps both during transmit and
during receive, doubling the outcome of your effort.

19. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-05 13:41:34 UTC
From: Channel Jumper <Channel.Jumper.b2e1498@radiobanter.com>
Message-ID: <Channel.Jumper.b2e1498@radiobanter.com>
Source record: 442

Well,
I read a lot of intelligent information on this post and some not intelligent information.
I think that what your problem is - is that instead of using your noggin, you want to buy something that will do your thinking for you.

If you have 4 batteries, and you connect it to a 10 amp charger, you will still place a 10 amp charge upon the batteries, but to the batteries, it will look more like a 2.5 amp charger - since it is dividing the current between them.

I have seen some cheap people in my life, but I will guess the OP takes the cake. If you think that a 10 amp charger is going to make your electric bill go up or down by regulating the power being applied to the battery at day vs night - you are only fooling yourself.

Until you understand a charge vs. a surface charge, you will never understand what events are taking place within the batteries.
I liked the analogy of someone using diodes to isolate each battery.
But a even better solution is to use those batteries as a battery bank, say on a transistor radio - police scanner would be a good example.

If you charge the batteries nearly full charge and you use those batteries for a couple of days or even a week at a time, you will create a cycle, which will keep the batteries at optimum power - slow down the calcification on the battery plates and keep the one good battery from being killed by the one junk battery that doesn't store as much power.

The other thing is - if you are stupid enough to use a trolling motor with a deep cycle battery until you run it down to nothing, then you ought to be willing to replace those batteries every 4 years, because even though they say deep cycle - you are squeezing the life out of them when you discharge them beyond 10.5 volts DC.

Your battery charger is not a power generating station - it doesn't work like 3 mile island. It will create a charge sufficient enough to recharge a battery to the point of where it is useable again and then it will reduce the amount of current, so it does not over heat the plates in the battery.
The fold back on the charger is sufficient enough to protect the batteries, but once the VOM - and this is the missing link in your hardware - once the VOM shows 13.7 volts - the battery holds as much power as it can possibly hold... Like a cup of water, what happens when you over fill it? The excess product spills out.

Batteries by nature are dirty.
The dirt, acid etc on the battery creates a discharge because the
current flows out of the battery through the dielectric to ground.
The other thing I didn't read is what you placed the batterys on?
Wood is prefered, but some rubber mats might not be bad either, as long
as they are thick enough and kept clean.
A heavy truck mud flap would probably work well.

The missing link in this post is to advise you not to connect the
batteries either in series or in parrellel, but to PURCHASE a BATTERY
TENDER...
This takes all the guess work out of keeping your batteries charged.

Even if you watch a couple of episodes of American Chopper, eventually
you will see someone go to the battery rack and pull out a fresh battery
from the rack. How do you think they keep those batteries charged?
Do you think that they use a mindless battery charger? Or do you think
that they use a Battery Tender or some other commercial battery
charger?

Do the math - if they build a dozen motorcycles a week, how many
batteries does that add up to at the end of the year?

--
Channel Jumper

20. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 01:57:52 UTC
From: David <no@spam.please>
Message-ID: <kcda2v$8uc$1@dont-email.me>
Source record: 443

On Sat, 05 Jan 2013 04:02:59 -0800, JIMMIE wrote:

> The beer got flowing the other day and some of my friends and I got to
> BSing about the possibility of transmitting a microwave pulse and
> reciving it reflected off the moon. Plans are to use a microwave oven
> magnetron for the transmitter. We were wondering if this would be legal.

No, it would not be legal to do it as you described. However, there are
lots of ways to do it legally:

http://en.wikipedia.org/wiki/EME_%28communications%29

http://www.electronics-radio.com/articles/ham_radio/amateur-propagation/
moonbounce-propagation-eme.php

etc. Google is your friend.

21. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 02:15:09 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <dmnpr9-7kk.ln1@mail.specsol.com>
Source record: 444

David <no@spam.please> wrote:
> On Sat, 05 Jan 2013 04:02:59 -0800, JIMMIE wrote:
>
>> The beer got flowing the other day and some of my friends and I got to
>> BSing about the possibility of transmitting a microwave pulse and
>> reciving it reflected off the moon. Plans are to use a microwave oven
>> magnetron for the transmitter. We were wondering if this would be legal.
>
> No, it would not be legal to do it as you described. However, there are
> lots of ways to do it legally:

And why not in the USA?

Microwave oven mangetrons operate at 2.45 GHz, which is the top of the
2.39 to 2.45 GHz band and should be trivial to pull down a little bit.

All modes are allowed in the band.

All licencess other than Novice can use the band.

22. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 03:44:09 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <h_KdnRdb4b8X2XfNnZ2dnUVZ_vmdnZ2d@earthlink.com>
Source record: 445

"JIMMIE" <JIMMIEDEE123@yahoo.com> wrote in message
news:beb915c1-cbf1-4c3a-8e3c-8f981efdc300@googlegroups.com...
>The beer got flowing the other day and some of my friends and I got to
>BSing about the possibility of transmitting a microwave pulse and reciving
>it reflected off the moon. Plans are to use a microwave oven magnetron for
>the transmitter. >We were wondering if this would be legal.

As long as you can keep the microwave in the ham band it would be legal. A number of years ago in the 73 Magazine there was an artical on converting a microwave to a ham transmitter. Some microwaves, if not all operate somewhere aroung 2 to 3 Ghz. You just need to make sure it is tuned to the ham band that is somewhere in that range and you have a license above the novice level.

There might be a number of technical resons it may or may not work.

23. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 07:05:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1357542300@panix.com>
Source record: 446
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.2 2009/11/25 14:41:01
Posting-Frequency: posted twice monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

One significant omission, requiring immediate updates, for this article |
is that it does not mention newer amateur radio newsgroups created since |
it was written, including: |

rec.radio.amateur.antenna |
rec.radio.amateur.boatanchors |
rec.radio.amateur.dx |
rec.radio.amateur.equipment |
rec.radio.amateur.homebrew |
rec.radio.amateur.moderated |
rec.radio.amateur.space |

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:
```

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.

24. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 11:12:01 UTC
From: Keith <get@real.com>
Message-ID: <k9ble8dcf90o6gdma1ipoq9l6vfo96muud@4ax.com>
Source record: 447

Oh look, Tuuk is back again.

25. VHF/UHF books for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 14:21:16 UTC
From: Henry <hsknoll@comcast.net>
Message-ID: <kceli4npn1@dont-email.me>
Source record: 448

I have the following books for sale with the prices I'm asking. All are in very good to excellent to like new. Some have my name in them. All have good bindings. All are plus postage from zip 55082. Payment in US$ in advance by check or money order. Sorry, no Paypal. When replying include your name and address so I can get postage.

Satellite Exp's Hndbk 1990 ARRL $12
UHF/Microwave Exp's Man1990 ARRL $12
VHF Antenna Hndbk 1965 Kyle-73 Pub $5
VHF for the Radio Amateur Jones $8
VHF Hand Book Orr $8

Henry WA0GOZ

> "JIMMIE" <JIMMIEDEE123@yahoo.com> wrote in message
> news:beb915c1-cbf1-4c3a-8e3c-8f981efdc300@googlegroups.com...
>
>>The beer got flowing the other day and some of my friends and I got to
>>BSing about the possibility of transmitting a microwave pulse and reciving
>>it reflected off the moon. Plans are to use a microwave oven magnetron for
>>the transmitter. >We were wondering if this would be legal.
>
>
> As long as you can keep the microwave in the ham band it would be legal. A
> number of years ago in the 73 Magazine there was an artical on converting a
> microwave to a ham transmitter. Some microwaves, if not all operate
> somewhere aroung 2 to 3 Ghz. You just need to make sure it is tuned to the
> ham band that is somewhere in that range and you have a license above the
> novice level.
>
> There might be a number of technical resons it may or may not work.
>
>
>

26. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 14:50:59 UTC
From: Channel Jumper <Channel.Jumper.b30b798@radiobanter.com>
Message-ID: <Channel.Jumper.b30b798@radiobanter.com>
Source record: 450

Instead of telling you how stupid your question is - I will refer you to the FCC web site - Part 97.....

Part 97 says - no unauthroized transmissions - hence if you cannot ID your signal, you cannot transmit anywhere except 11 meters.
11 meters you are limited to no more then 3 watts AM or 12 watts PEP SSB..
No digital modes and no repeaters on 11 meters.

Second off - if licensed as an amateur - you have to follow the band plan.
You can't just pick a frequency that sounds quiet and start operating.
One amateur recently was fined for operating on 350 Mhz band, I think his fine was around $12,000.00

Third - you would need to limit your transmit power to no more then 1500 watts PEP, and you would have to have the equipment no only to measure the transmit power, but also to do a field survey - since if you had neighbors, you would have to test the exposure limits in the neighborhood.

Your records would have to be kept of when you operated and available for review by the FCC - should they come knocking on your door.
Most of the band specturm is being used for one thing or another and just because you think that it is high enough that no one would hear you, doesn't mean that someone isn't using it for something legally / commercially..

http://www.arrl.org/part-97-amateur-radio

http://www.ntia.doc.gov/files/ntia/publications/2003-allochrt.pdf

--
Channel Jumper

27. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 14:51:15 UTC
From: bilou <padepub@free.fr>
Message-ID: <kcend9$2766$1@adenine.netfront.net>
Source record: 449

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:h_KdnRdb4b8X2XfNnZ2dnUVZ_vmdnZ2d@earthlink.com...
>
> There might be a number of technical resons it may or may not work.
+1
For your information with an ordinary S Band radar:
1000KW peak power into a 35 db antenna and about 1Mhz bandwith
You DONT receive echoes from the moon.
Very small bandwith is the key of success and magnetron is definitely
not a good choice.

--- news://freenews.netfront.net/ - complaints: news@netfront.net ---

28. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 17:30:31 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <nadrr9-t8q.ln1@mail.specsol.com>
Source record: 301

Channel Jumper <Channel.Jumper.b30b798@radiobanter.com> wrote:
>
> Instead of telling you how stupid your question is - I will refer you to
> the FCC web site - Part 97.....
>
> Part 97 says - no unauthroized transmissions - hence if you cannot ID
> your signal, you cannot transmit anywhere except 11 meters.
> 11 meters you are limited to no more then 3 watts AM or 12 watts PEP
> SSB..
> No digital modes and no repeaters on 11 meters.

11 meters has nothing what so ever to do with the question.

There are many ways to ID a signal, and "unauthorized transmissions" has
little to noting to do with IDing.

> Second off - if licensed as an amateur - you have to follow the band
> plan.

No, you don't; band plans are voluntary.

You have to follow the FCC frequency allocations.

> You can't just pick a frequency that sounds quiet and start operating.
> One amateur recently was fined for operating on 350 Mhz band, I think
> his fine was around $12,000.00

Irrelevant.

Microwave ovens operate at 2.45 GHz.

There is an amateur band at 2.39 to 2.45 GHz. One should probably
force the frequency down a little to be safe.

> Third - you would need to limit your transmit power to no more then 1500
> watts PEP, and you would have to have the equipment no only to measure
> the transmit power, but also to do a field survey - since if you had
> neighbors, you would have to test the exposure limits in the
> neighborhood.

Not quite.

First, there are few, if any, microwave magnetrons capable of 1.5 KW so
the requirement to measure output is moot; just pick one that puts out
less than 1.5 Kw.

Second, a field survey is not appropriate nor needed for a directional
antenna pointing into the sky.

> Your records would have to be kept of when you operated and available
> for review by the FCC - should they come knocking on your door.

Nonsense; the US requirement for ham logging went away a long time ago.

> Most of the band specturm is being used for one thing or another and
> just because you think that it is high enough that no one would hear
> you, doesn't mean that someone isn't using it for something legally /
> commercially..

Again, nonsense as there is a ham band where microwave oven magnetrons
operate.

> http://www.arrl.org/part-97-amateur-radio
>
> http://www.ntia.doc.gov/files/ntia/publications/2003-allochrt.pdf

Read your own links and note the 2.39 to 2.45 GHz ham band.

29. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-07 19:23:53 UTC
From: you <you@shadows.orgs>
Message-ID: <you-3B4C6B.10234407012013@news.starband.net>
Source record: 302

In article <nadrr9-t8q.ln1@mail.specsol.com>, jimp@specsol.spam.sux.com
wrote:

> Channel Jumper <Channel.Jumper.b30b798@radiobanter.com> wrote:
> >
> > Instead of telling you how stupid your question is - I will refer you to
> > the FCC web site - Part 97.....
> >
> > Part 97 says - no unauthroized transmissions - hence if you cannot ID
> > your signal, you cannot transmit anywhere except 11 meters.
> > 11 meters you are limited to no more then 3 watts AM or 12 watts PEP
> > SSB..
> > No digital modes and no repeaters on 11 meters.
>
> 11 meters has nothing what so ever to do with the question.
>
> There are many ways to ID a signal, and "unauthorized transmissions" has
> little to noting to do with IDing.
>
> > Second off - if licensed as an amateur - you have to follow the band
> > plan.
>
> No, you don't; band plans are voluntary.
>
> You have to follow the FCC frequency allocations.
>
> > You can't just pick a frequency that sounds quiet and start operating.
> > One amateur recently was fined for operating on 350 Mhz band, I think
> > his fine was around $12,000.00
>
> Irrelevant.
>
> Microwave ovens operate at 2.45 GHz.
>
> There is an amateur band at 2.39 to 2.45 GHz. One should probably
> force the frequency down a little to be safe.
>
> > Third - you would need to limit your transmit power to no more then 1500
> > watts PEP, and you would have to have the equipment no only to measure
> > the transmit power, but also to do a field survey - since if you had
> > neighbors, you would have to test the exposure limits in the
> > neighborhood.
>
> Not quite.

>
> First, there are few, if any, microwave magnetrons capable of 1.5 KW so
> the requirement to measure output is moot; just pick one that puts out
> less than 1.5 Kw.
>
> Second, a field survey is not appropriate nor needed for a directional
> antenna pointing into the sky.
>
> > Your records would have to be kept of when you operated and available
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>
> > Most of the band specturm is being used for one thing or another and
> > just because you think that it is high enough that no one would hear
> > you, doesn't mean that someone isn't using it for something legally /
> > commercially..
>
> Again, nonsense as there is a ham band where microwave oven magnetrons
> operate.
>
> > http://www.arrl.org/part-97-amateur-radio
> >
> > http://www.ntia.doc.gov/files/ntia/publications/2003-allochrt.pdf
>
> Read your own links and note the 2.39 to 2.45 GHz ham band.

Just a NOTE here: Channel Jumper is an Idiot... all should know this
right off....

The CW Power of a Microwave Magnitron is measured In Watts, and if you
PULSE that Magnitron by sending your ID in Morse Code, and then average
the Pulses over Time, you reduce the actual ERP by the Duty Cycle, which
figures into the Legal Power Output. Just keep the emissions within the
2.4 Ghz Ham Band and with a Tech or higher Class License your all set.

I mean Duh.... this should be self-evident to ANY Ham who can read
english and googled CFR47Part97....

30. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-08 01:34:16 UTC
From: Channel Jumper <Channel.Jumper.b316059@radiobanter.com>
Message-ID: <Channel.Jumper.b316059@radiobanter.com>
Source record: 303

If a person cannot read the answer, then when they become combative,
they tend to drift off the subject with their own axe to grind.

If you can get someone to read this to him, the only place other then 11
meters where a person can operate without a license is FRS - which
allows one half of one watt of transmit power....

A Band Plan - be it FCC - which I posted or ARRL is one in the same.
ARRL band plan tends to just show Amateur Frequencies - since that is
all that amateurs are concerned with....

Maybe you never heard of a pink slip - operate sometime on the CW
portion in SSB Phone or AM and see how long you can operate before
someone gives you heck...

Do it on a continous basis - and see how long you can operate before you
get a pink slip...

--
Channel Jumper

31. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-08 06:03:16 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <4epsr9-je3.ln1@mail.specsol.com>
Source record: 304

Channel Jumper <Channel.Jumper.b316059@radiobanter.com> wrote:
>
> If a person cannot read the answer, then when they become combative,
> they tend to drift off the subject with their own axe to grind.

Babble.

> If you can get someone to read this to him, the only place other then 11
> meters where a person can operate without a license is FRS - which
> allows one half of one watt of transmit power....

Not true and irrelevant anyway.

> A Band Plan - be it FCC - which I posted or ARRL is one in the same.

Nope.

> ARRL band plan tends to just show Amateur Frequencies - since that is
> all that amateurs are concerned with....

Nope.

> Maybe you never heard of a pink slip - operate sometime on the CW
> portion in SSB Phone or AM and see how long you can operate before
> someone gives you heck...

Irrelevant.

> Do it on a continous basis - and see how long you can operate before you
> get a pink slip...

Babble.

32. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-08 17:40:28 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <c92ur9-7q7.ln1@mail.specsol.com>
Source record: 305

Jef <jeff@assystems.com> wrote:
>
>>
>> A Band Plan - be it FCC - which I posted or ARRL is one in the same.
>> ARRL band plan tends to just show Amateur Frequencies - since that is
>> all that amateurs are concerned with....
>>
>
> That is not correct, The FCC limit what modes may be transmitted on what
> frequency *on some bands*, but that is very different from the ARRL or
> IARU bandplans, which are much more detailed. The FCC place no
> restrictions on 70cms and above.
>
> Jeff

Almost, but not quite.

The FCC defines the frequencies and the emission modes that MAY be used
on the frequencies and this is law.

A band plan such as the ARRL's is a voluntary suggestion for the best
practices use of the various emissions within a band, i.e. a band plan
will show where within a band FM repeaters, SSB, TV, etc. should operate.

Note that while band plans are voluntary and carry no legal authority,
gross violations of band plans can be concidered to be willful interference
to other users, and as such IS a legal issue.

33. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-09 13:40:07 UTC
From: Channel Jumper <Channel.Jumper.b335a98@radiobanter.com>
Message-ID: <Channel.Jumper.b335a98@radiobanter.com>
Source record: 306

jimp@specsol.spam.sux.com;800481 Wrote:
> Jef jeff@assystems.com wrote:-
> -
>
> A Band Plan - be it FCC - which I posted or ARRL is one in the same.
> ARRL band plan tends to just show Amateur Frequencies - since that is
> all that amateurs are concerned with....
> -
>
> That is not correct, The FCC limit what modes may be transmitted on
> what
> frequency *on some bands*, but that is very different from the ARRL or
>
> IARU bandplans, which are much more detailed. The FCC place no
> restrictions on 70cms and above.
>
> Jeff-
>
> Almost, but not quite.
>
> The FCC defines the frequencies and the emission modes that MAY be used
> on the frequencies and this is law.
>
> A band plan such as the ARRL's is a voluntary suggestion for the best
> practices use of the various emissions within a band, i.e. a band plan
> will show where within a band FM repeaters, SSB, TV, etc. should
> operate.
>
> Note that while band plans are voluntary and carry no legal authority,
> gross violations of band plans can be concidered to be willful
> interference
> to other users, and as such IS a legal issue.

And Basically, the FCC just says this is the allowable frequencies, and
where they are located.
The ARRL Band Plan says this is our frequencies and this is how you can
use them.
The FCC explain's how power is measured and how side bands affects
performance and defines interference.
They even go so far as to explain how much spectrum your signal is
allowed to occupy and how close to band limits you are allowed to
approach.

As far as the log went, up and until recently - you still had to keep a
log for 60 meters, - before the power increase and you are only allowed

to operate into a dipole antenna.
I think it has something to do with the algorythym's of a persons heart and the ability to kill someone with your RF if they get too close or have heart problems.

The origional question is moot at this point, because you are not a licensed amateur and you do not have permission to have emmissions anywhere except a small segment of the UHF - called FRS and the 11 meters - which is where all of this started.

If you had an amateur radio license, we wouldn't even be talking about this right now, or the banter back n forth.
This is the purpose of the amateur radio license exams ' - to give everyone at least a little exposure to the rules and regulations and proper operating procedures. This is also the reason why I am dead set against reissueing licenses to people who left their license lasp and to allow ham in a day classes - where a person that doesn't know anything, is allowed to cram for one day and get a license without ever having to operate or know anything.

This mindset does not produce - trained radio operators - at no cost to the government.

--
Channel Jumper

34. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-09 18:18:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <pro0s9-2ch.ln1@mail.specsol.com>
Source record: 307

Channel Jumper <Channel.Jumper.b335a98@radiobanter.com> wrote:

<snip old stuff>

> And Basically, the FCC just says this is the allowable frequencies, and
> where they are located.

OK so far, except it should be "these are the allowable..." and once the
frequencies are stated you know "where they are located".

> The ARRL Band Plan says this is our frequencies and this is how you can
> use them.

Essentially, except it should be "these are our frequencies and this is how
you should use them".

> The FCC explain's how power is measured and how side bands affects
> performance and defines interference.

Not quite.

> They even go so far as to explain how much spectrum your signal is
> allowed to occupy and how close to band limits you are allowed to
> approach.

Straying off into la-la land here.

> As far as the log went, up and until recently - you still had to keep a
> log for 60 meters, - before the power increase and you are only allowed
> to operate into a dipole antenna.

Yep, into la-la land.

Operations concidered experimental, i.e. performed under a waiver, require
logging, normal operations do not and have not for a long time.

> I think it has something to do with the algorythym's of a persons heart
> and the ability to kill someone with your RF if they get too close or
> have heart problems.

Nope, not even close.

> The origional question is moot at this point, because you are not a
> licensed amateur and you do not have permission to have emmissions
> anywhere except a small segment of the UHF - called FRS and the 11
> meters - which is where all of this started.

Who is it that you think is not a licensed amateur?

> If you had an amateur radio license, we wouldn't even be talking about
> this right now, or the banter back n forth.

If you mean me, I've been licensed since 1964 and the reason for this
"banter" is that most everything you post is nonsense.

> This is the purpose of the amateur radio license exams ' - to give
> everyone at least a little exposure to the rules and regulations and
> proper operating procedures. This is also the reason why I am dead set
> against reissueing licenses to people who left their license lasp and to
> allow ham in a day classes - where a person that doesn't know anything,
> is allowed to cram for one day and get a license without ever having to
> operate or know anything.

Rambling nonsense.

> This mindset does not produce - trained radio operators - at no cost to
> the government.

Ditto.

35. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-10 02:18:24 UTC
From: David <no@spam.please>
Message-ID: <kcl8dg$ac4$1@dont-email.me>
Source record: 308

On Mon, 07 Jan 2013 02:15:09 +0000, jimp wrote:

> David <no@spam.please> wrote:
>> On Sat, 05 Jan 2013 04:02:59 -0800, JIMMIE wrote:
>>
>>> The beer got flowing the other day and some of my friends and I got to
>>> BSing about the possibility of transmitting a microwave pulse and
>>> reciving it reflected off the moon. Plans are to use a microwave oven
>>> magnetron for the transmitter. We were wondering if this would be
>>> legal.
>>
>> No, it would not be legal to do it as you described. However, there
>> are lots of ways to do it legally:
>
> And why not in the USA?
>
> Microwave oven mangetrons operate at 2.45 GHz, which is the top of the
> 2.39 to 2.45 GHz band and should be trivial to pull down a little bit.
>
> All modes are allowed in the band.
>
> All licencess other than Novice can use the band.

Microwave magnetrons would likely have unacceptable spurs and sidelobes,
as the frequency is not very stable.

36. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-10 02:48:08 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <8om1s9-lhk.ln1@mail.specsol.com>
Source record: 309

David <no@spam.please> wrote:
> On Mon, 07 Jan 2013 02:15:09 +0000, jimp wrote:
>
>> David <no@spam.please> wrote:
>>> On Sat, 05 Jan 2013 04:02:59 -0800, JIMMIE wrote:
>>>
>>>> The beer got flowing the other day and some of my friends and I got to
>>>> BSing about the possibility of transmitting a microwave pulse and
>>>> reciving it reflected off the moon. Plans are to use a microwave oven
>>>> magnetron for the transmitter. We were wondering if this would be
>>>> legal.
>>>
>>> No, it would not be legal to do it as you described. However, there
>>> are lots of ways to do it legally:
>>
>> And why not in the USA?
>>
>> Microwave oven mangetrons operate at 2.45 GHz, which is the top of the
>> 2.39 to 2.45 GHz band and should be trivial to pull down a little bit.
>>
>> All modes are allowed in the band.
>>
>> All licencess other than Novice can use the band.
>
> Microwave magnetrons would likely have unacceptable spurs and sidelobes,
> as the frequency is not very stable.

Spurs are highly unlikely with a cavity based device like a magnetron.

Sidelobes are an artifact of antennas, not oscillators, unless you are
talking about modulation sidelobes which are pretty trivially dealt with
in a pulse device.

The frequency stability of a magnetron is highly correlated to the
power supply, i.e. the anode voltage.

The power supply and pulse control of an oven would be useless for any
sort of communications, so one would need to build one that pulled
the frequency down into the amateur band and provided for some sort of
modulation scheme.

The simplest modulation would be very high speed CW.

37. HOT HOT VIDEOS AND SUPER KISSING PHOTOS TOO HOT,101;,

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-10 10:02:18 UTC
From: LPWS <3ghfhfffgg@gmail.com>
Message-ID: <79e90419-a129-4edb-a8a0-d7d3359f5cdc@jl13g2000pbb.googlegroups.com>
Source record: 310

hot videos

real kiss videos
http://videos2youth.blogspot.in/2011/11/real-kiss-videos.html
first night hot videos
http://videos2youth.blogspot.in/2011/11/first-night-hot-videos.html
mallu hot videos
http://videos2youth.blogspot.in/2011/11/mallu-hot-videos.html
indian bedroom hot
http://videos2youth.blogspot.in/2011/11/indian-bedroom-hot.html
romantic videos
http://videos2youth.blogspot.in/2011/11/romantic-videos.html

HOT PHOTOS
lip kiss photos
http://photostwo2u.blogspot.in/2010/09/photos.html
bikini photos
http://photostwo2u.blogspot.in/2010/09/photos-2.html
SEXY PHOTOS
http://photostwo2u.blogspot.in/2010/09/photos-3.html
indian hot photos
http://photostwo2u.blogspot.in

ALL INTERVIEW QUESTIONS

java interview questions
http://allinterviewsquestions.blogspot.in/2009/02/java-interview-questions.html
oracle interview questions
http://allinterviewsquestions.blogspot.in/2009/02/oracle-interview-questions.html
hardware interview questions 4
http://allinterviewsquestions.blogspot.in/2009/02/hardware-interview-questions.html
SQL Server Interview Questions
http://allinterviewsquestions.blogspot.in2009/02/sql-server-interview-questions.html
dotnet questions 3
http://allinterviewsquestions.blogspot.in/2009/02/dotnet-questions-3.html

38. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-10 17:35:33 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <5oa3s9-i4q.ln1@mail.specsol.com>
Source record: 311

Jef <jeff@assystems.com> wrote:
>
>>
>> Spurs are highly unlikely with a cavity based device like a magnetron.
>>
>> Sidelobes are an artifact of antennas, not oscillators, unless you are
>> talking about modulation sidelobes which are pretty trivially dealt with
>> in a pulse device.
>>
>> The frequency stability of a magnetron is highly correlated to the
>> power supply, i.e. the anode voltage.
>>
>> The power supply and pulse control of an oven would be useless for any
>> sort of communications, so one would need to build one that pulled
>> the frequency down into the amateur band and provided for some sort of
>> modulation scheme.
>>
>> The simplest modulation would be very high speed CW.
>>
>
> Some years ago a local ham injection locked his microwave oven and
> produced a pretty stable source in the 2.4GHZ band.
>
> Jeff

That would be the smart thing to do if one wants frequency stability and
these days it is pretty easy to do.

39. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-10 20:03:47 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <GLVVe5Pj6x7QFwyO@g3ohx.demon.co.uk>
Source record: 312

In message <5oa3s9-i4q.ln1@mail.specsol.com>, jimp@specsol.spam.sux.com
writes
>Jef <jeff@assystems.com> wrote:
>>
>>>
>>> Spurs are highly unlikely with a cavity based device like a magnetron.
>>>
>>> Sidelobes are an artifact of antennas, not oscillators, unless you are
>>> talking about modulation sidelobes which are pretty trivially dealt with
>>> in a pulse device.
>>>
>>> The frequency stability of a magnetron is highly correlated to the
>>> power supply, i.e. the anode voltage.
>>>
>>> The power supply and pulse control of an oven would be useless for any
>>> sort of communications, so one would need to build one that pulled
>>> the frequency down into the amateur band and provided for some sort of
>>> modulation scheme.
>>>
>>> The simplest modulation would be very high speed CW.
>>>
>>
>> Some years ago a local ham injection locked his microwave oven and
>> produced a pretty stable source in the 2.4GHZ band.
>>
>> Jeff
>
>That would be the smart thing to do if one wants frequency stability and
>these days it is pretty easy to do.
>
While these technical discussions are very interesting, I can't help
feeling that most of it will go over the head of the OP. Even if he
knows nothing about amateur radio, he will by now have realised that
moonbounce is quite a specialist subject, and not something that the
ordinary man-in-the-street would be able to suddenly decide to have a go
at. If he does know about amateur radio, he probably knows this already!
--
Ian

40. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-10 20:20:25 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkeu8k9.o1t.nomail@xs8.xs4all.nl>
Source record: 313

Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:
> While these technical discussions are very interesting, I can't help
> feeling that most of it will go over the head of the OP. Even if he
> knows nothing about amateur radio, he will by now have realised that
> moonbounce is quite a specialist subject, and not something that the
> ordinary man-in-the-street would be able to suddenly decide to have a go
> at. If he does know about amateur radio, he probably knows this already!

Well, I have not personally used moonbounce but I have visited a moonbounce
station back in the late seventies and I sometimes read about moonbounce
as it is today, and I get the impression that it has become a lot
easier for the average ham to build a moonbounce station.
It may not be for the ordinary man-in-the-street and probably also
not for the ordinary novice radio amateur, but someone who can read
and think and is not without money should be able to assemble a
JT65 moonbounce station. Back in the seventies it required you to
be a lunatic, have a suitable location, and a real lot of money.

41. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-10 20:45:57 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <5tl3s9-fdr.ln1@mail.specsol.com>
Source record: 314

Rob <nomail@example.com> wrote:
> Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:
>> While these technical discussions are very interesting, I can't help
>> feeling that most of it will go over the head of the OP. Even if he
>> knows nothing about amateur radio, he will by now have realised that
>> moonbounce is quite a specialist subject, and not something that the
>> ordinary man-in-the-street would be able to suddenly decide to have a go
>> at. If he does know about amateur radio, he probably knows this already!
>
> Well, I have not personally used moonbounce but I have visited a moonbounce
> station back in the late seventies and I sometimes read about moonbounce
> as it is today, and I get the impression that it has become a lot
> easier for the average ham to build a moonbounce station.
> It may not be for the ordinary man-in-the-street and probably also
> not for the ordinary novice radio amateur, but someone who can read
> and think and is not without money should be able to assemble a
> JT65 moonbounce station. Back in the seventies it required you to
> be a lunatic, have a suitable location, and a real lot of money.

When I got my Novice many decades ago, my transmitter was a 6AQ5 xtal
oscillator and a superregen receiver, all homebrew down to the power
supplies with parts mostly from salvaged TV sets.

Given all the stuff available today, I would rank building a moonbounce
station of some sort at 2.4 GHz to be about the same order of difficulty.

42. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-11 21:13:55 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <kcpvao$2sp$1@dont-email.me>
Source record: 315

On 1/5/2013 6:02 AM, JIMMIE wrote:
> The beer got flowing the other day and some of my friends and I got to BSing about the possibility of transmitting a microwave pulse and reciving it reflected off the moon. Plans are to use a microwave oven magnetron for the transmitter. We were wondering if this would be legal.
>

The Moon does not bounce. It goes "Splat".

43. HOT VIDEOS FOR YOUTH AND ALL ADULT PEOPLE 2013 SEXY PHOTOS

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-13 01:48:27 UTC
From: LPWS <3ghfhfffgg@gmail.com>
Message-ID: <45041196-bc27-4a3d-baea-a0377c58ea30@sb6g2000pbb.googlegroups.com>
Source record: 316

TOLLYWOOD HOT
http://tbiphotos.blogspot.in/2013/01/tollywood-hot.html
TAMIL HOT
http://tbiphotos.blogspot.in/2013/01/tamil-hot.html
MALLU HOT
http://tbiphotos.blogspot.in/2013/01/mallu-hot.html
BOLLYWOOD HOT
http://tbiphotos.blogspot.in/2013/01/bollywood-hot.html
INDIAN HOT
http://tbiphotos.blogspot.in/2013/01/indian-hot.html
MALLU KISS
http://tbiphotos.blogspot.in/2013/01/mallu-kiss.html
TOLLYWOOD KISS
http://tbiphotos.blogspot.in/2013/01/tollywood-kiss.html
TAMIL LIP KISS
http://tbiphotos.blogspot.in/2013/01/tamil-lip-kiss.html
BOOLYWOOD LIP KISS
http://tbiphotos.blogspot.in/2013/01/boolywood-lip-kiss.html
INDIAN LIP KISS
http://tbiphotos.blogspot.in/2013/01/indian-lip-kiss.html
INDIAN REAL LIP KISS
http://tbiphotos.blogspot.in/2013/01/indian-real-lip-kiss.html

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SQL Server Interview Questions
http://allinterviewsquestions.blogspot.in2009/02/sql-server-interview-questions.html
dotnet questions 3
http://allinterviewsquestions.blogspot.in/2009/02/dotnet-questions-3.html

44. In and around the Connecticut town, many gun owners say the school shooting only strengthened their view that guns alone are not to blame for such violence.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-13 15:44:50 UTC
From: Liberals Murdered 20 Innocent Babies To Push Gun Control <obama@cowards.gov>
Message-ID: <3ef83909e791716af627a7f97e43d48b@msgid.frell.theremailer.net>
Source record: 317
Cross-posted to: alt.pirate.radio,rec.radio.amateur.antenna,alt.radio.talk

http://www.latimes.com/news/nationworld/nation/la-na-newtown-gun-culture-20121221,0,6710027.story

NEWTOWN, Conn. • When the wind blows a certain way across the tree-topped hills, Gary Bennett can stand in his yard and hear echoes of gunfire from his hunting club five miles away. The sound comforts him.

"It's a huge tradition here," said Bennett, a retired electrician and former president of the club, which helped defeat a proposal to tighten Newtown's gun ordinances in September. "I'd rather see more gun clubs come to town, training people with the use of firearms so that everyone's doing it safely."

Anguished families are still burying the 20 children and six women who were shot to death by a lone gunman last Friday just after the morning Pledge of Allegiance at Sandy Hook Elementary School. But a surprising local undercurrent has emerged: Many gun owners here say the slaughter has sharpened their view that guns alone aren't the problem.

"I wish that at that school somebody was armed," said Kuthair Habboush, a software engineer who keeps a weapon at home for protection. "If a security guard or a teacher or a principal had been armed, somebody could have taken the [killer] out" before his lethal rampage.

Firearms are deep in the culture of this corner of New England. Two of America's most storied weapons manufacturers, Colt and Winchester, were based in Connecticut. Some historians say the West was won in Hartford • the state capital and birthplace of the Colt revolvers favored by lawmen and outlaws alike beginning in the 1830s.

Today, dozens of gun dealers, gun instructors, gun repair shops and shooting ranges do a brisk business in Newtown and nearby cities and towns. Private hunting clubs are widespread, many with waiting lists for membership.

The National Shooting Sports Foundation, a powerful lobbying group for gun retailers, has its headquarters across the highway from Sandy Hook Elementary School.

"You'd be surprised," said Sean Eldridge, owner of Parker Gunsmithing, a gun repair shop in nearby Danbury, referring to his customers. "They're regular people and they have an arsenal in their basement."

That was the case with Nancy Lanza, a wealthy divorced mother who enjoyed jazz, craft beer and frequent visits to shooting ranges. She kept at least five weapons, all legally registered to her, in the large Colonial-style house she shared with her 20-year-old son, Adam.

Early last Friday, authorities say, Adam Lanza shot his mother repeatedly in the head with her .22-caliber rifle as she lay in bed. He then drove to the elementary school, shot his way in and fired dozens of rounds into two first-grade classes using her Bushmaster assault-style rifle. Some of the children were shot 11 times. He then shot and killed himself with one of her pistols.

Far from the wealthy coastal communities that serve as bedroom suburbs and weekend resorts for New York City, 70 miles south, Newtown was a farming and hunting area for generations.

Dave Chapdelaine, a resident for more than 40 years, recalled walking down the middle of his rural road with a shotgun in the 1970s, taking aim through the trees at rabbits, squirrels and pheasants. Every year he and three friends held a game cookout, and sold rabbit fur to a company in New York.

Now houses are nestled in those woods, and Chapdelaine, a school bus driver, heads north to Vermont to hunt. He's among many in Newtown who question the wisdom of stiffer gun control laws, which President Obama called for Wednesday at the White House.

"To me, a firearm 99% of the time, when it's unloaded it's a beautiful work of art," Chapdelaine said. "It's not meant to kill people. It's meant to protect people and help you provide for your family. But you have to keep them out of the hands of the loonies."

Over the last decade or so, the town's rustic character changed with the arrival of upscale families who commute to New York or other cities, and who see guns as a nuisance, if not a threat.

"There are people that have had their families here for several generations, love this town for what it is and what it was, and they want to preserve that bucolic rural setting," said Andy Sachs, a real estate agent and member of a town commission that supervises police. "And there's a new guard who's moved in the past 15 years that want to see more growth opportunities, more commercial opportunities, more vibrant suburban living. That's a struggle."

One sign of the divide was a sharp debate this fall over the commission's proposals to curtail hours for target shooting, and to require police approval for shooting on private property, after a growing number of noise complaints.

Dozens of members of the Fairfield County Fish & Game Protective Assn., a 300-acre private hunting club on Newtown's southern outskirts, showed up at a town meeting in September to defend gun rights. Bowing to the outcry, the police commission shelved the proposal.

"It's an issue anywhere you have people moving in from big cities into a rural area and they have hard time dealing with what goes on here and want to make all these changes," said Bennett, the former hunting club president.

"We have to educate these people about what we do and why we do it," he added. "They should have no fears that our activities are going to impact them any way. You can change this gun law and that gun law, and it's not going to change things like [the school shooting] from happening."

Still, in a nod to the town's tragedy, the club has halted all hunting and shooting on its property for two weeks "so there wouldn't be the sound of gunfire while a funeral was going on," Bennett said.

The National Shooting Sports Foundation, the lobbying group near the school, hasn't commented publicly but posted a brief statement on its website saying that it was "deeply shaken and saddened" by the killings.
****
****

45. Re: In and around the Connecticut town, many gun owners say the school shooting only strengthened their view that guns alone are not to blame for such violence.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-14 21:52:49 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kd1urbsku1@dont-email.me>
Source record: 318
Cross-posted to: alt.pirate.radio,rec.radio.amateur.antenna,alt.radio.talk

```
On 1/13/2013 10:44 AM, Liberals Murdered 20 Innocent Babies To Push Gun
Control wrote:
> http://www.latimes.com/news/nationworld/nation/la-na-newtown-gun-
> culture-20121221,0,6710027.story
>
> NEWTOWN, Conn. ï¿½
> "I wish that at that school somebody was armed," said Kuthair
> Habboush, a software engineer who keeps a weapon at home for
> protection. "If a security guard or a teacher or a principal had
> been armed, somebody could have taken the [killer] out" before
> his lethal rampage.

I hear people say this time and time again, but how often do we hear of
that happening? I only know of one time when both the shooter and the
victims had weapons...

http://news.minnesota.publicradio.org/features/2004/11/22_kelleherb_huntershooting/

That didn't turn out so well for anyone.

Rick
```

46. Re: In and around the Connecticut town, many gun owners say the school shooting only strengthened their view that guns alone are not to blame for such violence.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-14 23:00:40 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <o9fes9-irm.ln1@mail.specsol.com>
Source record: 319
Cross-posted to: alt.pirate.radio,rec.radio.amateur.antenna,alt.radio.talk

```
In rec.radio.amateur.antenna rickman <gnuarm@gmail.com> wrote:
> On 1/13/2013 10:44 AM, Liberals Murdered 20 Innocent Babies To Push Gun
> Control wrote:
>> http://www.latimes.com/news/nationworld/nation/la-na-newtown-gun-
>> culture-20121221,0,6710027.story
>>
>> NEWTOWN, Conn. —
>> "I wish that at that school somebody was armed," said Kuthair
>> Habboush, a software engineer who keeps a weapon at home for
>> protection. "If a security guard or a teacher or a principal had
>> been armed, somebody could have taken the [killer] out" before
>> his lethal rampage.
>
> I hear people say this time and time again, but how often do we hear of
> that happening? I only know of one time when both the shooter and the
> victims had weapons...
>
> http://news.minnesota.publicradio.org/features/2004/11/22_kelleherb_huntershooting/
>
> That didn't turn out so well for anyone.
>
> Rick

It actually happens a lot but doesn't get much play in the media because
1 dead nut case doesn't have the news appeal of multiple dead victims.

Here's something else you won't hear much in the media; many states DO
have armed security in schools, including a lot in liberal California.
```

47. Re: In and around the Connecticut town, many gun owners say the school shooting only strengthened their view that guns alone are not to blame for such violence.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-15 00:25:29 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kd27nqjqs1@dont-email.me>
Source record: 320
Cross-posted to: alt.pirate.radio,rec.radio.amateur.antenna,alt.radio.talk

```
On 1/14/2013 6:00 PM, jimp@specsol.spam.sux.com wrote:
> In rec.radio.amateur.antenna rickman<gnuarm@gmail.com> wrote:
>> On 1/13/2013 10:44 AM, Liberals Murdered 20 Innocent Babies To Push Gun
>> Control wrote:
>>> http://www.latimes.com/news/nationworld/nation/la-na-newtown-gun-
>>> culture-20121221,0,6710027.story
>>>
>>> NEWTOWN, Conn. —
>>> "I wish that at that school somebody was armed," said Kuthair
>>> Habboush, a software engineer who keeps a weapon at home for
>>> protection. "If a security guard or a teacher or a principal had
>>> been armed, somebody could have taken the [killer] out" before
>>> his lethal rampage.
>>
>> I hear people say this time and time again, but how often do we hear of
>> that happening? I only know of one time when both the shooter and the
>> victims had weapons...
>>
>> http://news.minnesota.publicradio.org/features/2004/11/22_kelleherb_huntershooting/
>>
>> That didn't turn out so well for anyone.
>>
>> Rick
>
> It actually happens a lot but doesn't get much play in the media because
> 1 dead nut case doesn't have the news appeal of multiple dead victims.
>
> Here's something else you won't hear much in the media; many states DO
> have armed security in schools, including a lot in liberal California.

I was told by a friend in VA that he grew up with an armed policeman in
the high school. Don't know if that is county by county or the entire
state. Most aspects of schools are decided by the counties.

Rick
```

48. Re: In and around the Connecticut town, many gun owners say the school shooting only strengthened their view that guns alone are not to blame for such violence.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-15 00:38:30 UTC
From: joeturn <joeturn2000@yahoo.com>
Message-ID: <5c568f51-ff9b-40b5-8eb9-bcb1397cfb5c@b11g2000yqh.googlegroups.com>
Source record: 321
Cross-posted to: alt.pirate.radio,rec.radio.amateur.antenna,alt.radio.talk

On Jan 13, 10:44 am, "Liberals Murdered 20 Innocent Babies To Push Gun
Control" <ob...@cowards.gov> wrote:
> http://www.latimes.com/news/nationworld/nation/la-na-newtown-gun-
> culture-20121221,0,6710027.story
>
> NEWTOWN, Conn. — When the wind blows a certain way across the
> tree-topped hills, Gary Bennett can stand in his yard and hear
> echoes of gunfire from his hunting club five miles away. The
> sound comforts him.
>
> "It's a huge tradition here," said Bennett, a retired
> electrician and former president of the club, which helped
> defeat a proposal to tighten Newtown's gun ordinances in
> September. "I'd rather see more gun clubs come to town, training
> people with the use of firearms so that everyone's doing it
> safely."
>
> Anguished families are still burying the 20 children and six
> women who were shot to death by a lone gunman last Friday just
> after the morning Pledge of Allegiance at Sandy Hook Elementary
> School. But a surprising local undercurrent has emerged: Many
> gun owners here say the slaughter has sharpened their view that
> guns alone aren't the problem.
>
> "I wish that at that school somebody was armed," said Kuthair
> Habboush, a software engineer who keeps a weapon at home for
> protection. "If a security guard or a teacher or a principal had
> been armed, somebody could have taken the [killer] out" before
> his lethal rampage.
>
> Firearms are deep in the culture of this corner of New England.
> Two of America's most storied weapons manufacturers, Colt and
> Winchester, were based in Connecticut. Some historians say the
> West was won in Hartford — the state capital and birthplace of
> the Colt revolvers favored by lawmen and outlaws alike beginning
> in the 1830s.
>
> Today, dozens of gun dealers, gun instructors, gun repair shops
> and shooting ranges do a brisk business in Newtown and nearby
> cities and towns. Private hunting clubs are widespread, many
> with waiting lists for membership.

>
> The National Shooting Sports Foundation, a powerful lobbying
> group for gun retailers, has its headquarters across the highway
> from Sandy Hook Elementary School.
>
> "You'd be surprised," said Sean Eldridge, owner of Parker
> Gunsmithing, a gun repair shop in nearby Danbury, referring to
> his customers. "They're regular people and they have an arsenal
> in their basement."
>
> That was the case with Nancy Lanza, a wealthy divorced mother
> who enjoyed jazz, craft beer and frequent visits to shooting
> ranges. She kept at least five weapons, all legally registered
> to her, in the large Colonial-style house she shared with her 20-
> year-old son, Adam.
>
> Early last Friday, authorities say, Adam Lanza shot his mother
> repeatedly in the head with her .22-caliber rifle as she lay in
> bed. He then drove to the elementary school, shot his way in and
> fired dozens of rounds into two first-grade classes using her
> Bushmaster assault-style rifle. Some of the children were shot
> 11 times. He then shot and killed himself with one of her
> pistols.
>
> Far from the wealthy coastal communities that serve as bedroom
> suburbs and weekend resorts for New York City, 70 miles south,
> Newtown was a farming and hunting area for generations.
>
> Dave Chapdelaine, a resident for more than 40 years, recalled
> walking down the middle of his rural road with a shotgun in the
> 1970s, taking aim through the trees at rabbits, squirrels and
> pheasants. Every year he and three friends held a game cookout,
> and sold rabbit fur to a company in New York.
>
> Now houses are nestled in those woods, and Chapdelaine, a school
> bus driver, heads north to Vermont to hunt. He's among many in
> Newtown who question the wisdom of stiffer gun control laws,
> which President Obama called for Wednesday at the White House.
>
> "To me, a firearm — 99% of the time, when it's unloaded — it's a
> beautiful work of art," Chapdelaine said. "It's not meant to
> kill people. It's meant to protect people and help you provide
> for your family. But you have to keep them out of the hands of
> the loonies."
>
> Over the last decade or so, the town's rustic character changed
> with the arrival of upscale families who commute to New York or
> other cities, and who see guns as a nuisance, if not a threat.
>
> "There are people that have had their families here for several

> generations, love this town for what it is and what it was, and
> they want to preserve that bucolic rural setting," said Andy
> Sachs, a real estate agent and member of a town commission that
> supervises police. "And there's a new guard who's moved in the
> past 15 years that want to see more growth opportunities, more
> commercial opportunities, more vibrant suburban living. That's a
> struggle."
>
> One sign of the divide was a sharp debate this fall over the
> commission's proposals to curtail hours for target shooting, and
> to require police approval for shooting on private property,
> after a growing number of noise complaints.
>
> Dozens of members of the Fairfield County Fish & Game Protective
> Assn., a 300-acre private hunting club on Newtown's southern
> outskirts, showed up at a town meeting in September to defend
> gun rights. Bowing to the outcry, the police commission shelved
> the proposal.
>
> "It's an issue anywhere you have people moving in from big
> cities into a rural area and they have hard time dealing with
> what goes on here and want to make all these changes," said
> Bennett, the former hunting club president.
>
> "We have to educate these people about what we do and why we do
> it," he added. "They should have no fears that our activities
> are going to impact them any way. You can change this gun law
> and that gun law, and it's not going to change things like [the
> school shooting] from happening."
>
> Still, in a nod to the town's tragedy, the club has halted all
> hunting and shooting on its property for two weeks "so there
> wouldn't be the sound of gunfire while a funeral was going on,"
> Bennett said.
>
> The National Shooting Sports Foundation, the lobbying group near
> the school, hasn't commented publicly but posted a brief
> statement on its website saying that it was "deeply shaken and
> saddened" by the killings.
>
>

Sandy Hoax School Shooting Staged Drill for gun control!

http://www.wellaware1.com/fairfield.htm

49. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-15 07:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1358233201@panix.com>
Source record: 322
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

50. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-15 22:33:29 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <YOkJs.37566$Id.9375@newsfe24.iad>
Source record: 323

Hi Channel Jumper

Sorry for such a late reply, once again you had no understanding of my question.

Your answer, while long and interesting was either a duplication of answers already given or had nothing to do with my question.

But thanks anyway, nice try again, I will take the other's advice again this time.

My batteries are fine, I can charge them in parrellel if I like, but remember they must be equals.
Do the math you say Channel?? lol,,, And another reason why your answer lacks logic is that you don't understand I live in an area that has a 50% discount on electrical consumption for 12 hours during the evening and early morning. So that is why I talked about night time charging. i know, I know,, nickles and dimes, but after a few weeks of 10 or 15 amp charging, or 1000 or 2000 watts at .08c per kwh it sure adds up at the end of the month. Its all a state of mind. Do you turn your light out when you leave a room?

Your estimate Channel Jumper of 4 years for deep cycle batteries I can correct for you, my last deep cycle batteries lasted 8 or 9 years and I ran them down every fishing time by the downrigger balls up and down 30 tims a trip along with all the electronics and radio, lights, phones, 2m rig, vhf marine radio, etc etc. And I kept them stored somtimes in basement, sometimes left in boat, most times stored in garage for winter season without charge. So where did you get your "4 year life" from? Your own experience? Maybe I should give you some advice.

Thanks for all the advice everyone,,,,I appreciate every word of it.

73s

"Channel Jumper" <Channel.Jumper.b2e1498@radiobanter.com> wrote in message news:Channel.Jumper.b2e1498@radiobanter.com...
>
> Well,
> I read a lot of intelligent information on this post and some not
> intelligent information.
> I think that what your problem is - is that instead of using your
> noggin, you want to buy something that will do your thinking for you.
>
> If you have 4 batteries, and you connect it to a 10 amp charger, you
> will still place a 10 amp charge upon the batteries, but to the
> batteries, it will look more like a 2.5 amp charger - since it is
> dividing the current between them.

>
> I have seen some cheap people in my life, but I will guess the OP takes
> the cake. If you think that a 10 amp charger is going to make your
> electric bill go up or down by regulating the power being applied to the
> battery at day vs night - you are only fooling yourself.
>
> Until you understand a charge vs. a surface charge, you will never
> understand what events are taking place within the batteries.
> I liked the analogy of someone using diodes to isolate each battery.
> But a even better solution is to use those batteries as a battery bank,
> say on a transistor radio - police scanner would be a good example.
>
> If you charge the batteries nearly full charge and you use those
> batteries for a couple of days or even a week at a time, you will create
> a cycle, which will keep the batteries at optimum power - slow down the
> calcification on the battery plates and keep the one good battery from
> being killed by the one junk battery that doesn't store as much power.
>
> The other thing is - if you are stupid enough to use a trolling motor
> with a deep cycle battery until you run it down to nothing, then you
> ought to be willing to replace those batteries every 4 years, because
> even though they say deep cycle - you are squeezing the life out of them
> when you discharge them beyond 10.5 volts DC.
>
> Your battery charger is not a power generating station - it doesn't work
> like 3 mile island. It will create a charge sufficient enough to
> recharge a battery to the point of where it is useable again and then it
> will reduce the amount of current, so it does not over heat the plates
> in the battery.
> The fold back on the charger is sufficient enough to protect the
> batteries, but once the VOM - and this is the missing link in your
> hardware - once the VOM shows 13.7 volts - the battery holds as much
> power as it can possibly hold... Like a cup of water, what happens when
> you over fill it? The excess product spills out.
>
> Batteries by nature are dirty.
> The dirt, acid etc on the battery creates a discharge because the
> current flows out of the battery through the dielectric to ground.
> The other thing I didn't read is what you placed the batterys on?
> Wood is prefered, but some rubber mats might not be bad either, as long
> as they are thick enough and kept clean.
> A heavy truck mud flap would probably work well.
>
> The missing link in this post is to advise you not to connect the
> batteries either in series or in parrellel, but to PURCHASE a BATTERY
> TENDER...
> This takes all the guess work out of keeping your batteries charged.
>
> Even if you watch a couple of episodes of American Chopper, eventually
> you will see someone go to the battery rack and pull out a fresh battery

> from the rack. How do you think they keep those batteries charged?
> Do you think that they use a mindless battery charger? Or do you think
> that they use a Battery Tender or some other commercial battery
> charger?
>
> Do the math - if they build a dozen motorcycles a week, how many
> batteries does that add up to at the end of the year?
>
>
>
>
> --
> Channel Jumper

51. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-17 00:57:01 UTC
From: Channel Jumper <Channel.Jumper.b3d3dd8@radiobanter.com>
Message-ID: <Channel.Jumper.b3d3dd8@radiobanter.com>
Source record: 324

You can lead a horse to water, but you can't make em drink!

I had a neighbor once that didn't want to wear out his light bulbs, so
he used a flashlight when he went from room to room.

Light bulbs were 4/$1.00

Flashlight batteries were $.50 each.

The amount of power a battery charger uses is insignificant - anyone so
anal to think you will save money on your electric bill by not using a
couple of watts of power during peak times is crazy.

No I do not shut off the lights when I go from room to room.
Most of my lights are florescent - a gift of working for a company that
did retail remodeling of Lowes stores.

The difference between leaving the light on vs turning it on and off and
ruining the bulbs - if the period of time is less then 15 minutes - you
do not save anything by turning the lights on and off.

--
Channel Jumper

52. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-18 00:45:32 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <GW0Ks.11326$O02.9495@newsfe18.iad>
Source record: 325

Wow, that is an odd neighborhood.

Costs of each kwh decreases by 50% (half) in my neck of the woods at evening time till morning light. 12 hours. So we do save money using high electrical consumers at night. It is not minimual, not to me anyway.

I was wondering why you only get 4 years out of your deep cycle batteries, when I get at least 8 and you are giving me advice? I think you are just jumping at the chance to fling some mud at someone who is less knowledgable as yourself in electrical situations.

Light bulbs, flashlights, horses to water, neighbors, again, you skirted right around the question.

Thanks anyway,,,

73s

"Channel Jumper" <Channel.Jumper.b3d3dd8@radiobanter.com> wrote in message news:Channel.Jumper.b3d3dd8@radiobanter.com...
>
> You can lead a horse to water, but you can't make em drink!
>
> I had a neighbor once that didn't want to wear out his light bulbs, so
> he used a flashlight when he went from room to room.
>
> Light bulbs were 4/$1.00
>
> Flashlight batteries were $.50 each.
>
> The amount of power a battery charger uses is insignificant - anyone so
> anal to think you will save money on your electric bill by not using a
> couple of watts of power during peak times is crazy.
>
> No I do not shut off the lights when I go from room to room.
> Most of my lights are florescent - a gift of working for a company that
> did retail remodeling of Lowes stores.
>
> The difference between leaving the light on vs turning it on and off and
> ruining the bulbs - if the period of time is less then 15 minutes - you
> do not save anything by turning the lights on and off.
>
>
>
>
> --

> Channel Jumper
>

53. 2 meter J-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-19 23:29:17 UTC
From: ogrowup@webtv.net
Message-ID: <21226-50FB2C4D-161@storefull-3173.bay.webtv.net>
Source record: 326

I'm considering building an emergency antenna- a J-pole for 2 meters made from 300-ohm TV twin lead.

But before going ahead, I wonder- can such an antenna handle 50 watts input?

--
"A man who can own a gun is a citizen. A man who cannot own a gun is a subject."--

Unknown

54. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-19 23:33:36 UTC
From: Channel Jumper <Channel.Jumper.b413258@radiobanter.com>
Message-ID: <Channel.Jumper.b413258@radiobanter.com>
Source record: 328

You are a retard...

Sometimes a guy just has to cut a person loose when they just don't get
it the first time...

--
Channel Jumper

55. Re: 2 meter J-pole

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-20 00:04:14 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <H7ydnTiIP5PiqWbNnZ2dnUVZ_q2dnZ2d@earthlink.com>
Source record: 327

"Padraigh ProAmerica" <ogrowup@webtv.net> wrote in message
news:21226-50FB2C4D-161@storefull-3173.bay.webtv.net...
> I'm considering building an emergency antenna- a J-pole for 2 meters
> made from 300-ohm TV twin lead.
>
> But before going ahead, I wonder- can such an antenna handle 50 watts
> input?
>
>

Yes, 50 watts is fine for a J-pole and 300 ohm twin lead.

56. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-20 05:57:51 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <js0nf8pb12sq0jkru6dk8hghd8hsa1pe1v@4ax.com>
Source record: 329

On Thu, 17 Jan 2013 19:45:32 -0500, "Tom" <abraa@cadabraa.ca> wrote:

>I was wondering why you only get 4 years out of your deep cycle batteries,
>when I get at least 8 and you are giving me advice? I think you are just
>jumping at the chance to fling some mud at someone who is less knowledgable
>as yourself in electrical situations.

Our radio club is currently at 35 years for our batteries. Previously,
they were running a small telephone central office:
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/Batteries.jpg>
By your logic, that makes me supremely knowledgable (about batteries
at least) and only one step below a battery god.

No compliments or praise for this feat of battery longevity please. I
prefer burnt offerings and ocassional human sacrifice.

Battery gods do not fling mud. We fling lightning bolts.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

57. test

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-20 12:17:26 UTC
From: gbr <k4vai@juno.com>
Message-ID: <kdgn8k$e86$1@adenine.netfront.net>
Source record: 330

```
--- news://freenews.netfront.net/ - complaints: news@netfront.net ---
```

58. Re: Moon Bounce

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 00:42:41 UTC
From: tom <news4792@taring.org>
Message-ID: <pKGdnZttRs6cEmHNnZ2dnUVZ_r2dnZ2d@iphouse.net>
Source record: 331

On 1/10/2013 2:20 PM, Rob wrote:
> Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:
>> While these technical discussions are very interesting, I can't help
>> feeling that most of it will go over the head of the OP. Even if he
>> knows nothing about amateur radio, he will by now have realised that
>> moonbounce is quite a specialist subject, and not something that the
>> ordinary man-in-the-street would be able to suddenly decide to have a go
>> at. If he does know about amateur radio, he probably knows this already!
>
> Well, I have not personally used moonbounce but I have visited a moonbounce
> station back in the late seventies and I sometimes read about moonbounce
> as it is today, and I get the impression that it has become a lot
> easier for the average ham to build a moonbounce station.
> It may not be for the ordinary man-in-the-street and probably also
> not for the ordinary novice radio amateur, but someone who can read
> and think and is not without money should be able to assemble a
> JT65 moonbounce station. Back in the seventies it required you to
> be a lunatic, have a suitable location, and a real lot of money.
>

Yes, there is a program that works for recieved signals below the noise,
does all the work for you, and lets you run as low as 100 watts with a
single decent yagi on 2m.

It also looks up calls from a built in database and is wrong often
enough that most real EMErs with an ounce of respect won't use it. Many
logs submitted show QSOs with people not on the air.

There is nothing like actually hearing the signal.

tom
K0TAR

59. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 01:10:28 UTC
From: tom <news4792@taring.org>
Message-ID: <VbqdnbQSaLkZCGHNnZ2dnUVZ_q6dnZ2d@iphouse.net>
Source record: 332

On 1/17/2013 6:45 PM, Tom wrote:

<SNIP>

> I was wondering why you only get 4 years out of your deep cycle
> batteries, when I get at least 8 and you are giving me advice? I think
> you are just jumping at the chance to fling some mud at someone who is
> less knowledgable as yourself in electrical situations.
>
> Light bulbs, flashlights, horses to water, neighbors, again, you skirted
> right around the question.
>
> Thanks anyway,,,
>
> 73s

I buy used deep cycles at the 4 to 8 year point. But I buy really good ones. The 200AH I currently have in my van (180 watts of panels with an MPP charging system) are currently at 12.8 volts and haven't seen a charge for 3 months. That is as good as it gets. One is 9 years old and the other is 5.

They are 2 AGM UPS batteries. One is a 67AH that costs about $300 new, and the other is 134AH that costs about $550 new. I got the 67 for free from a damaged shipment - bent terminals due to poor shipper handling, the receiver rejected the whole pallet, we got 12 of them for free. I paid $100 for the 4 year old one. They are from the same manufacturer and the same series.

You get what you pay for. Just make sure the guy that pays for it is a business and that they regularly rotate out old batteries from their UPS's.

tom
K0TAR

60. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 02:12:25 UTC
From: tom <news4792@taring.org>
Message-ID: <vr6dnZgxJNOUOWHNnZ2dnUVZ_uOdnZ2d@iphouse.net>
Source record: 333

On 1/20/2013 7:10 PM, tom wrote:
>
> I buy used deep cycles at the 4 to 8 year point. But I buy really good
> ones. The 200AH I currently have in my van (180 watts of panels with an
> MPP charging system) are currently at 12.8 volts and haven't seen a
> charge for 3 months. That is as good as it gets. One is 9 years old
> and the other is 5.
>
> They are 2 AGM UPS batteries. One is a 67AH that costs about $300 new,
> and the other is 134AH that costs about $550 new. I got the 67 for free
> from a damaged shipment - bent terminals due to poor shipper handling,
> the receiver rejected the whole pallet, we got 12 of them for free. I
> paid $100 for the 4 year old one. They are from the same manufacturer
> and the same series.
>
> You get what you pay for. Just make sure the guy that pays for it is a
> business and that they regularly rotate out old batteries from their UPS's.
>
> tom
> K0TAR
>

Here are links to those 2 batteries. The *-270 link is the closest
current battery to my 67AH. The *-475 is current.

http://www.unitedpb.com/documents/cd/dynasty%20ups%2012-270.pdf
http://www.unitedpb.com/documents/cd/dynasty%20ups%2012-475.pdf

tom
K0TAR

61. Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 10:21:16 UTC
From: Richard Ferryman <richardferryman@btinternet.com>
Message-ID: <zdadnSxyffwAi2DNnZ2dnUVZ7oSdnZ2d@bt.com>
Source record: 334

I have come by a Tonna 9 element yagi for 430MHz to 440MHz. The driven element is a folded dipole and has an n-type connector attached. SWR looks correct and it works but there is a slight skew to the radiation pattern. The n-type connector is potted in a plastic or epoxy and looks too small to have any sort of balanced to unbalanced device in it. I intend putting a ferrite choke on the feed cable to help. Tonna antennas have a good reputation and I am surprised at the apparent feed method. Does anyone know if I have missed something?
Dick G4BBH

62. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 12:40:06 UTC
From: bilou <padepub@free.fr>
Message-ID: <kdjcvc$5s4$1@adenine.netfront.net>
Source record: 335

"Richard Ferryman" <richardferryman@btinternet.com> wrote in message
news:zdadnSxyffwAi2DNnZ2dnUVZ7oSdnZ2d@bt.com...
>I have come by a Tonna 9 element yagi for 430MHz to 440MHz. The driven
>element is a folded dipole and has an n-type connector attached. SWR looks
>correct and it works but there is a slight skew to the radiation pattern.
>The n-type connector is potted in a plastic or epoxy and looks too small to
>have any sort of balanced to unbalanced device in it. I intend putting a
>ferrite choke on the feed cable to help. Tonna antennas have a good
>reputation and I am surprised at the apparent feed method. Does anyone
>know if I have missed something?
> Dick G4BBH
Hi
As far as I remember F9FT ,designer of those antennas, was not
convinced of the usefullness of balancing devices for long yagis .
He said that the slight skew was the only real drawback of not using
any .
I believe you are on your own to prove he was wrong :-)

--- news://freenews.netfront.net/ - complaints: news@netfront.net ---

63. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 14:29:12 UTC
From: Channel Jumper <Channel.Jumper.b432c99@radiobanter.com>
Message-ID: <Channel.Jumper.b432c99@radiobanter.com>
Source record: 336

Richard Ferryman;800950 Wrote:
> I have come by a Tonna 9 element yagi for 430MHz to 440MHz. The driven
>
> element is a folded dipole and has an n-type connector attached. SWR
> looks
> correct and it works but there is a slight skew to the radiation
> pattern.
> The n-type connector is potted in a plastic or epoxy and looks too small
> to
> have any sort of balanced to unbalanced device in it. I intend putting
> a
> ferrite choke on the feed cable to help. Tonna antennas have a good
> reputation and I am surprised at the apparent feed method. Does anyone
> know
> if I have missed something?
> Dick G4BBH

First you cannot check antenna resonance with a SWR meter, that only
tells the story of the feed line.
You need a dip meter or a antenna analyzer.

Second - you can use a loop, or a 1:1 Balun inline or beads..

My question is - what frequency do you want it for and what do you want
to do with it =- transmit or receive?

430 - 440 is not within the parameters of amateur radio for
repeaters....
You could talk simplex or work slow scan television and CW / Digital
modes and that is about it.

--
Channel Jumper

64. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 17:41:22 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkfqve2.mno.nomail@xs8.xs4all.nl>
Source record: 337

```
Channel Jumper <Channel.Jumper.b432c99@radiobanter.com> wrote:
> 430 - 440 is not within the parameters of amateur radio for
> repeaters....
> You could talk simplex or work slow scan television and CW / Digital
> modes and that is about it.

Only in your limited mind.
```

65. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 22:32:20 UTC
From: Richard Ferryman <richardferryman@btinternet.com>
Message-ID: <46-dnaEU7-dlXGDNnZ2dnUVZ8mydnZ2d@bt.com>
Source record: 338

In UK we have 430MHz to 440MHz. I checked the 'SWR' by measuring return loss at 1MHz steps from 420MHz to 450MHz.. The radiation pattern was measured outdoors above a snow covered field (the nearest thing I have to laboratory conditions!) at 435MHz and polar plot made automatically. I also ran the test with two ferrite blocks on the cable next to the antenna connector. These were of unknown type but supposed to be similar to type 67. The blocks eliminated the skew with no measurable change in return loss. The initial skew was really quite small compared with the 3dB beamwidth but was recognisable on the plot, particularly on the sharper rear lobes. Curiously there is no skew shown on the plot in the manufacturers datasheet 220909e.pdf but their photo does show a black 'lump' just to the rear of the connector. Perhaps they did have a ferrite on there after all!
Dick G4BBH

"Channel Jumper" <Channel.Jumper.b432c99@radiobanter.com> wrote in message news:Channel.Jumper.b432c99@radiobanter.com...
>
> Richard Ferryman;800950 Wrote:
>> I have come by a Tonna 9 element yagi for 430MHz to 440MHz. The driven
>>
>> element is a folded dipole and has an n-type connector attached. SWR
>> looks
>> correct and it works but there is a slight skew to the radiation
>> pattern.
>> The n-type connector is potted in a plastic or epoxy and looks too small
>> to
>> have any sort of balanced to unbalanced device in it. I intend putting
>> a
>> ferrite choke on the feed cable to help. Tonna antennas have a good
>> reputation and I am surprised at the apparent feed method. Does anyone
>> know
>> if I have missed something?
>> Dick G4BBH
>
> First you cannot check antenna resonance with a SWR meter, that only
> tells the story of the feed line.
> You need a dip meter or a antenna analyzer.
>
> Second - you can use a loop, or a 1:1 Balun inline or beads..
>
> My question is - what frequency do you want it for and what do you want
> to do with it =- transmit or receive?
>
> 430 - 440 is not within the parameters of amateur radio for

> repeaters....
> You could talk simplex or work slow scan television and CW / Digital
> modes and that is about it.
>
>
>
>
> --
> Channel Jumper

66. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 22:34:31 UTC
From: Richard Ferryman <richardferryman@btinternet.com>
Message-ID: <9KidnSQWCcrnX2DNnZ2dnUVZ8qSdnZ2d@bt.com>
Source record: 339

Yep - many modes, simplex or duplex. SSB, CW, AM, FM, all the digital
modes, DATV which is becoming popular on the band in Europe. Almost any
mode that exists on the other HF or VHF bands. Unfortunately 13.1 dBi is
not quite up to EME standards :-)
I use a pair of home made yagis fed as circular polarisation on this band
for satellite operation with great success.
The Tonna will be used for monitoring beacons and also for monitoring
meteor pings. The beamwidth is ideal for this.
It's all there - if you try!
Dick G4BBH

"Rob" <nomail@example.com> wrote in message
news:slrnkfqve2.mno.nomail@xs8.xs4all.nl...
> Channel Jumper <Channel.Jumper.b432c99@radiobanter.com> wrote:
>> 430 - 440 is not within the parameters of amateur radio for
>> repeaters....
>> You could talk simplex or work slow scan television and CW / Digital
>> modes and that is about it.
>
> Only in your limited mind.

67. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-21 23:38:06 UTC
From: tom <news4792@taring.org>
Message-ID: <x_Sdnd0NsubDTGDNnZ2dnUVZ_vGdnZ2d@iphouse.net>
Source record: 340

On 1/21/2013 4:32 PM, Richard Ferryman wrote:
> In UK we have 430MHz to 440MHz. I checked the 'SWR' by measuring return
> loss at 1MHz steps from 420MHz to 450MHz.. The radiation pattern was
> measured outdoors above a snow covered field (the nearest thing I have to
> laboratory conditions!) at 435MHz and polar plot made automatically. I
> also ran the test with two ferrite blocks on the cable next to the antenna
> connector. These were of unknown type but supposed to be similar to type
> 67. The blocks eliminated the skew with no measurable change in return
> loss. The initial skew was really quite small compared with the 3dB
> beamwidth but was recognisable on the plot, particularly on the sharper rear
> lobes. Curiously there is no skew shown on the plot in the manufacturers
> datasheet 220909e.pdf but their photo does show a black 'lump' just to the
> rear of the connector. Perhaps they did have a ferrite on there after all!
> Dick G4BBH

What did you use to do the plot? I notice you said "automatically". I
saw some software around a few years ago but haven't looked lately. We
do fairly decent gain measurements at NLRS Aurora (nlrs.org) and Central
States, but it's far far from automatic and not also the pattern.

tom
K0TAR

68. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-22 01:00:14 UTC
From: Richard Ferryman <richardferryman@btinternet.com>
Message-ID: <WoqdnWs_wMQ8eWDNnZ2dnUVZ8s-dnZ2d@bt.com>
Source record: 341

I use PolarPlot version 3.2.7 which can use the PC soundcard to make
received signal measurements or a wattmeter available in kit form from Fox
Delta. The software is freeware and runs under most Windows versions Win
2000, XP, Vista and Win 7. I don't know about Win 8. www.g4hfq.co.uk I
think the PM3A-USB kit is currently about $68. The help file 'Getting
Started' page is very helpful. Rotation of the antenna can use any rotator
once you calibrate the time of rotation. A single pulse starts the process.
I use a stepper motor drive which steps in 0.1 degree steps and is
switchable for 60, 180, 360 or 720 seconds for 360 degrees rotation.
Dick G4BBH

"tom" <news4792@taring.org> wrote in message
news:x_Sdnd0NsubDTGDNnZ2dnUVZ_vGdnZ2d@iphouse.net...
> On 1/21/2013 4:32 PM, Richard Ferryman wrote:
>> In UK we have 430MHz to 440MHz. I checked the 'SWR' by measuring return
>> loss at 1MHz steps from 420MHz to 450MHz.. The radiation pattern was
>> measured outdoors above a snow covered field (the nearest thing I have to
>> laboratory conditions!) at 435MHz and polar plot made automatically. I
>> also ran the test with two ferrite blocks on the cable next to the
>> antenna
>> connector. These were of unknown type but supposed to be similar to type
>> 67. The blocks eliminated the skew with no measurable change in return
>> loss. The initial skew was really quite small compared with the 3dB
>> beamwidth but was recognisable on the plot, particularly on the sharper
>> rear
>> lobes. Curiously there is no skew shown on the plot in the
>> manufacturers
>> datasheet 220909e.pdf but their photo does show a black 'lump' just to
>> the
>> rear of the connector. Perhaps they did have a ferrite on there after
>> all!
>> Dick G4BBH
>
> What did you use to do the plot? I notice you said "automatically". I
> saw some software around a few years ago but haven't looked lately. We do
> fairly decent gain measurements at NLRS Aurora (nlrs.org) and Central
> States, but it's far far from automatic and not also the pattern.
>
> tom
> K0TAR
>
>

69. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-22 02:17:30 UTC
From: tom <news4792@taring.org>
Message-ID: <VNSdnd_fRewka2DNnZ2dnUVZ_sydnZ2d@iphouse.net>
Source record: 342

On 1/21/2013 7:00 PM, Richard Ferryman wrote:
> I use PolarPlot version 3.2.7 which can use the PC soundcard to make
> received signal measurements or a wattmeter available in kit form from Fox
> Delta. The software is freeware and runs under most Windows versions Win
> 2000, XP, Vista and Win 7. I don't know about Win 8. www.g4hfq.co.uk I
> think the PM3A-USB kit is currently about $68. The help file 'Getting
> Started' page is very helpful. Rotation of the antenna can use any rotator
> once you calibrate the time of rotation. A single pulse starts the process.
> I use a stepper motor drive which steps in 0.1 degree steps and is
> switchable for 60, 180, 360 or 720 seconds for 360 degrees rotation.
> Dick G4BBH
>

Thanks. I am pretty sure that was the one I saw a few years ago. And I
have some of G4HFQ's other software. Good stuff.

tom
K0TAR

70. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-22 07:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1358838300@panix.com>
Source record: 343
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.2 2009/11/25 14:41:01
Posting-Frequency: posted twice monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

One significant omission, requiring immediate updates, for this article |
is that it does not mention newer amateur radio newsgroups created since |
it was written, including: |

rec.radio.amateur.antenna |
rec.radio.amateur.boatanchors |
rec.radio.amateur.dx |
rec.radio.amateur.equipment |
rec.radio.amateur.homebrew |
rec.radio.amateur.moderated |
rec.radio.amateur.space |

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:
```

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.

71. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-22 17:35:38 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <B5ALs.36332$H5.36123@newsfe28.iad>
Source record: 344

I am looking to cut an antenna for 70cm. I have seen lot of designs for the dual band like Slim Jim or J Pole or Ladder Line. Lots online but they are dual banders.

Anyone have a good recommendation for a single band 70cm antenna? I have ladder line (450ohm) and I have RG8u coax with bnc connector on one end (about 25ft.)

Any ideas for a single band 70cm? Can someone post a good link or good dimension? I don't have a "Dip meter or antenna analyser".

Thanks

73s

"Channel Jumper" <Channel.Jumper.b432c99@radiobanter.com> wrote in message news:Channel.Jumper.b432c99@radiobanter.com...
>
> Richard Ferryman;800950 Wrote:
>> I have come by a Tonna 9 element yagi for 430MHz to 440MHz. The driven
>>
>> element is a folded dipole and has an n-type connector attached. SWR
>> looks
>> correct and it works but there is a slight skew to the radiation
>> pattern.
>> The n-type connector is potted in a plastic or epoxy and looks too small
>> to
>> have any sort of balanced to unbalanced device in it. I intend putting
>> a
>> ferrite choke on the feed cable to help. Tonna antennas have a good
>> reputation and I am surprised at the apparent feed method. Does anyone
>> know
>> if I have missed something?
>> Dick G4BBH
>
> First you cannot check antenna resonance with a SWR meter, that only
> tells the story of the feed line.
> You need a dip meter or a antenna analyzer.
>
> Second - you can use a loop, or a 1:1 Balun inline or beads..
>
> My question is - what frequency do you want it for and what do you want
> to do with it =- transmit or receive?
>
> 430 - 440 is not within the parameters of amateur radio for
> repeaters....

> You could talk simplex or work slow scan television and CW / Digital
> modes and that is about it.
>
>
>
>
> --
> Channel Jumper
>

72. Re: Tonna 9 element 70cm yagi - feed method?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-22 19:40:05 UTC
From: dplatt@radagast.org
Message-ID: <lh63t9-pg2.ln1@radagast.org>
Source record: 345

In article <B5ALs.36332$H5.36123@newsfe28.iad>, Tom <abraa@cadabraa.ca> wrote:

>I am looking to cut an antenna for 70cm. I have seen lot of designs for the
>dual band like Slim Jim or J Pole or Ladder Line. Lots online but they are
>dual banders.
>
>Anyone have a good recommendation for a single band 70cm antenna? I have
>ladder line (450ohm) and I have RG8u coax with bnc connector on one end
>(about 25ft.)
>
>Any ideas for a single band 70cm? Can someone post a good link or good
>dimension? I don't have a "Dip meter or antenna analyser".

Take a look at the following.

http://www.repeater-builder.com/antenna/pdf/ground-plane-antennas-for-146-220-440-mhz.pdf

It shows simple ground-plane antennas for several bands. As drawn it
uses a SO-239 "UHF" socket connector as the basis for the antenna.
You could also use a female BNC connector, which would connect easily
to your RG8u BNC cable. The mounting plate can be aluminum (as they
suggest) or a scrap of single- or double-sided PC board material.

One useful tweak, is to cut the upper radiator wire an inch or so
longer than you need, and bend the upper end into a closed loop
and solder it. If you cut the wire so that the entire length from
connector to loop matches the dimensions in the article, it'll behave
the same way electrically... and you can run a length of heavy-duty
fishing line or some other insulating string through the loop and use
this to hang the antenna.

Ground-plane antennas of this sort can be very effective. The gain
towards the horizon differs very little from that of a J-pole or other
half-wave radiator, and the construction is easy and non-critical.
Cut the wire lengths to match the dimensions in the article (this sets
the resonant frequency), assemble, hang it up in the clear, and you're
good to go. If you do get ahold of an antenna analyzer or 440-capable
SWR meter you can tweak it for the best match (trim the radiator
and/or radials, and adjust the downwards bend-angle of the radials)
but this really shouldn't be necessary in practice.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

73. Re: Battery charging???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-23 03:41:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <3hkuf8lr2qpr45t37cija37f95jr6iso22@4ax.com>
Source record: 346

On Mon, 21 Jan 2013 20:38:32 +0000, Jim Higgins
<invalid@invalid.invalid> wrote:

>On Sat, 19 Jan 2013 21:57:51 -0800, Jeff Liebermann <jeffl@cruzio.com>
>wrote:
>
>>Our radio club is currently at 35 years for our batteries. Previously,
>>they were running a small telephone central office:
>><http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/Batteries.jpg>
>
>They look like C&D type KCT-720.

Yep. That's the model.
<http://www.cdtechno.com/product/vla/kct_kt.html>
The originally came from the Aptos central office. My guess(tm) is
that they had about 6-8 years of operation at the CO before they were
donate to the local radio club (K6BJ). The original pile was for
48VDC or 24 cells. The others were distributed in groups of 6 cells
to other radio clubs operating emergency repeaters. One of the clubs
managed to partially ruin theirs with a poor quality charger. Ours
has done well mostly because of the quality charger (donated by West
Marine). It's a 40A West Marine by Statpower/Xantrex charger:
<http://members.cruzio.com/~jeffl/k6bj/K6BJ%20Repeater/slides/40A%20battery%20charger.html
>
Another reason it has survived is because I refused to allow anyone to
run an "equalizing" charge. I'm a bit worried about temperature
tracking as the charger and batteries are essentially in separate
rooms. So far, no problems, but with the large thermal mass of the
batteries, they're unlikely to track the ambient temperature. The
charger does NOT have a remote temp sensor, and I don't want to mount
anything that might corrode in the battery box.

Incidentally, a real tragedy was this collection of fine cells:
<http://802.11junk.com/jeffl/crud/battery-jv.jpg>
They were in good shape, but because there were only 4 of them, we
would have needed to build a voltage booster to use them on 12VDC. We
tried really hard to find two more cells, and gave up after about 8
years of searching. So, they went to the lead recyclers. Bummer.

>And they look to be in VERY good
>condition. No appreciable swelling or plate distortion and no
>appreciable sediment.

We take good care of them. The photo is from 2003 when we let things
slide a bit. Here's a better photo (showing the dried out electrolyte
accumulation) also from 2003:

<http://802.11junk.com/jeffl/crud/k6bj-batteries-02.jpg>
The club was lucky to find a ham locally that knows how to take care
of big telco batteries. Much of the power wiring, interconnect
straps, bolts, hardware, and washers were replaced after the picture
was taken. I was at the site yesterday and could have taken a current
picture. Maybe next week when I clean up my mess.

>Looks like the positive post seals are leaking a bit and cleaning up
>those areas (including removing and cleaning the connectors) and
>applying those oil soaked felt washers you can get in most auto stores
>would help a lot to prevent further corrosion of the connectors. Maybe
>just clean selected positive posts that seem to be leaking the worst.

The battery box is excessively vented to the outside. That results in
condensation inside the battery box, which is where most of the dried
out puddles around the posts originated. Most of the acid came from
various individuals that just had to unscrew everything dripping
battery acid from the caps. That has been mostly cleaned up. There
was a slight leak on one of the posts (I forgot which one), but I just
smeared some grease around the post to keep it from spreading.

I don't recall if we put greased felt washers on the wire end
terminal. I think it's likely, but I'm not sure. I'll add it to the
next preventive maintenance exercise.

>For sure keep the covers dry.

We try, but the condensation doesn't make it easy. A few boxes of
baking soda and rice soak up much of the moisture.

>If they were made before early 1978 I may have been the Process
>Engineer in the plant where they were made.

I would guess(tm) that they were delivered to the CO in about 1982. No
clue when they were actually made. We had the documentation and
maintenance history on the batteries, but that disappeared in a
misguided shack "cleanup". Argh.

Thanks for the info. Please send me an email (address below) as I may
want to bother you with battery maintenance questions in the future. I
consider those batteries irreplaceable and the #1 asset of the radio
club.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

74. HOT LATEST UPDATED VIDEOS AND SEXY ACTRESES PHOTOS

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-25 04:58:03 UTC
From: 866434 <iashjbbxdhvv@gmail.com>
Message-ID: <edb494ae-859c-44d2-8c49-42d13d3e11ea@i2g2000pbi.googlegroups.com>
Source record: 347

VERY VERY VERY HOT HOT HOT ONLY HOT
http://acresesandmodels.blogspot.in/2011/06/real-kiss-hot-videos.html

for mopre hot videos
http://allvideosforyouth.blogspot.in/2010/08/super-hot-lip-kiss.html

jobs
http://alljobsaywhere.blogspot.in/

mobile

mobile games free download
http://mobileallinforation.blogspot.in

interview question
java interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/java-interview-questions-and-answers.html
oracle interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/oracle-interview-questions-and-answers.html
hardware interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/hardware-interview-questions-and-answers.html
networking interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/networking-interview-questions-and.html
dotnet interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/dotnet-interview-questions-and-answers.html
c interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/c-interview-questions-and-answers.html
datawarehousing interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/datawarehousing-interview-questions-and.html
sap interview questions and answers
http://alljobsandinterviwquestions.blogspot.com/2012/08/sap-interview-questions-and-answers.html

all jobs
java jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/java-jobs.html
oracle jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/oracle-jobs.html
sap jobs

http://alljobsandinterviwquestions.blogspot.com/2012/08/sap-jobs.html
hardware jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/hardware-jobs.html
networking jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/networking-jobs.html
datawarehousing jobs
http://alljobsandinterviwquestions.blogspot.com/2012/08/datawarehousing-jobs.html
GOOGLE ADSENSE
http://alljobsandinterviwquestions.blogspot.com/2012/08/google-adsense.html

75. 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-27 00:15:59 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <7I_Ms.86645$sm1.10262@newsfe22.iad>
Source record: 348

Ok

I just bought at some flea fest an old style Ringo style CB antenna with the ring on the bottom for matching tune. Also has the ground planes and bracket for them and the aluminum antenna looks about 20 feet long (in sections) and about 8 foot ground planes (4 total).

What I would like to do is make a 2m full wave antenna out of it. It looks real solid at about 6ft 4inches long with or without its gnd planes. I was thinking of using it at this length on a 45 foot tower at the top. I was thinking of wrapping the coax about 8 times at the top for RF reasons or matching reasons.

Any ideas why i shouldn't or should or any tips?

Thanks

73s

76. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-27 04:36:25 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-D93B7B.23362526012013@5ad64b5e.bb.sky.com>
Source record: 349

In article <7l_Ms.86645$sm1.10262@newsfe22.iad>,
"Tom" <abraa@cadabraa.ca> wrote:

> Ok
>
> I just bought at some flea fest an old style Ringo style CB antenna with the
> ring on the bottom for matching tune. Also has the ground planes and bracket
> for them and the aluminum antenna looks about 20 feet long (in sections) and
> about 8 foot ground planes (4 total).
>
> What I would like to do is make a 2m full wave antenna out of it. It looks
> real solid at about 6ft 4inches long with or without its gnd planes. I was
> thinking of using it at this length on a 45 foot tower at the top. I was
> thinking of wrapping the coax about 8 times at the top for RF reasons or
> matching reasons.
>
> Any ideas why i shouldn't or should or any tips?

Tom-

You can probably use the materials from the CB Ringo to make a 2m
equivalent. I think you can even find dimensions of the various Ringo
versions if you search the Cushcraft web site
<http://www.cushcraftamateur.com/prodsupport.php>. Ringos are the "AR"
models.

Fred
K4DII

77. German quad

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-27 08:05:37 UTC
From: Ben <kbw@allt2.se>
Message-ID: <ke2n3eilr2@dont-email.me>
Source record: 350

Sometimes the horizontal loop antenna is referred to as "the german quad". Does anybody know why?

78. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-27 14:36:04 UTC
From: Paul Drahn <pdrahn@webformixair.com>
Message-ID: <ke3e0t$797$1@dont-email.me>
Source record: 251

On 1/26/2013 4:15 PM, Tom wrote:
> Ok
>
> I just bought at some flea fest an old style Ringo style CB antenna with
> the ring on the bottom for matching tune. Also has the ground planes and
> bracket for them and the aluminum antenna looks about 20 feet long (in
> sections) and about 8 foot ground planes (4 total).
>
> What I would like to do is make a 2m full wave antenna out of it. It
> looks real solid at about 6ft 4inches long with or without its gnd
> planes. I was thinking of using it at this length on a 45 foot tower at
> the top. I was thinking of wrapping the coax about 8 times at the top
> for RF reasons or matching reasons.
>
> Any ideas why i shouldn't or should or any tips?
>
> Thanks
>
> 73s
>
>
Forget it! Use what you have on 10 meters. If you were closer, I would
give you a 2-meter Ringo antenna. The vertical part is 5/8 wave, not
full wave. They are a piece of aluminum junk. The Ringo Ranger type
antenna does actually work. I have one here I use on 2.

Paul, KD7HB

79. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-27 14:36:22 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <HXaNs.138878$pV4.128627@newsfe21.iad>
Source record: 252

Thanks for the link, I see all the Ringo dimensions for single band antenna.
I don't have that trap or other parts that would allow for dual bands.

Other than lots of hours of testing, some serious testing, has anyone had
any success with the full wave 2m antenna at 6ft 4"? Will that also be
somewhat acceptible for 440 mhz Receiving only?

Some of the Ringo have the ground planes and some don't. Since I have them
should I implement them or would they have adverse affects? What length?

Thanks

73s

"Fred McKenzie" <fmmck@aol.com> wrote in message
news:fmmck-D93B7B.23362526012013@5ad64b5e.bb.sky.com...
> In article <7l_Ms.86645$sm1.10262@newsfe22.iad>,
> "Tom" <abraa@cadabraa.ca> wrote:
>
>> Ok
>>
>> I just bought at some flea fest an old style Ringo style CB antenna with
>> the
>> ring on the bottom for matching tune. Also has the ground planes and
>> bracket
>> for them and the aluminum antenna looks about 20 feet long (in sections)
>> and
>> about 8 foot ground planes (4 total).
>>
>> What I would like to do is make a 2m full wave antenna out of it. It
>> looks
>> real solid at about 6ft 4inches long with or without its gnd planes. I
>> was
>> thinking of using it at this length on a 45 foot tower at the top. I was
>> thinking of wrapping the coax about 8 times at the top for RF reasons or
>> matching reasons.
>>
>> Any ideas why i shouldn't or should or any tips?
>
> Tom-
>
> You can probably use the materials from the CB Ringo to make a 2m
> equivalent. I think you can even find dimensions of the various Ringo
> versions if you search the Cushcraft web site
> <http://www.cushcraftamateur.com/prodsupport.php>. Ringos are the "AR"
> models.

>
> Fred
> K4DII
>

80. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-27 15:53:41 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <a4cNs.105419$EO2.46453@newsfe04.iad>
Source record: 253

Ok, Thanks for the ideas.

But I want to hear some positive ideas. How can I make this work for 2m and 70cm. I don't want a 10m omni.

Can I convert this to full wave omni for 2m? And should I use the gnd planes or not? I see the lengths of the ringos are 5/8 wave and would that be more suitable to measure it for 5/8 wave? Why not make it a full wave?

Yes, I could easily buy one that does everything I need or want, but I was hoping to salvage this one to utilize it to its maximum use. Or is it rubbish? My goal is to erect it at its most useful length for 2m and hopefully receive 70cm much better than I do now. But hopefully get better range on 2m.

Any reason why I shouldn't shorten this ringo I have to 6ft 4in (full wavelength for 2m) ? Any reasons why I shouldn't use the gnd planes? How long should they be for that length omni?

Thanks

"Paul Drahn" <pdrahn@webformixair.com> wrote in message
news:ke3e0t$797$1@dont-email.me...
> On 1/26/2013 4:15 PM, Tom wrote:
>> Ok
>>
>> I just bought at some flea fest an old style Ringo style CB antenna with
>> the ring on the bottom for matching tune. Also has the ground planes and
>> bracket for them and the aluminum antenna looks about 20 feet long (in
>> sections) and about 8 foot ground planes (4 total).
>>
>> What I would like to do is make a 2m full wave antenna out of it. It
>> looks real solid at about 6ft 4inches long with or without its gnd
>> planes. I was thinking of using it at this length on a 45 foot tower at
>> the top. I was thinking of wrapping the coax about 8 times at the top
>> for RF reasons or matching reasons.
>>
>> Any ideas why i shouldn't or should or any tips?
>>
>> Thanks
>>
>> 73s
>>
>>
> Forget it! Use what you have on 10 meters. If you were closer, I would
> give you a 2-meter Ringo antenna. The vertical part is 5/8 wave, not full

> wave. They are a piece of aluminum junk. The Ringo Ranger type antenna
> does actually work. I have one here I use on 2.
>
> Paul, KD7HB
>
>

81. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-27 21:36:14 UTC
From: Channel Jumper <Channel.Jumper.b4b69f8@radiobanter.com>
Message-ID: <Channel.Jumper.b4b69f8@radiobanter.com>
Source record: 254

I think that everyone on this forum has missed the point.
The op does not understand how antenna's works, is stuck in the CB radio and won't listen to reason.

A 9' long Ringo is 6 meters - 50 MHz.
It is also a 1/4 wave antenna for 27 MHz but will not work for 11 meters, because the impedance is all wrong - almost 5:1 VSWR....

When you shorten a antenna that is designed to work on another frequency, the design has to match in order for it to work and have the right impedance and be resonant.

A full wave antenna, other then a dipole antenna is not a balanced load.

The ring on the Ringo is the match, and the ring is around 32 inches long.
You have to subtract 30 inches from the total length - which a resonant antenna would only be about 40 inches long.

That doesn't leave much of a stub sticking up for a vertical radiator.

I gave away a HALO antenna for two meters, for working SSB and digital modes and the diameter of it was only about 24 inches.

Making a antenna is not as simple as just sticking something up in the air and connecting the coax to it and cutting off the excessive length and expecting it to work, like a mobile CB radio antenna........

Who was it that said, you can't fix stupid!

Buy a 2 meter antenna, forget about trying to make something out of your CB radio crap to save a couple of bucks.

What you could do is buy the ARRL antenna book and make a 4 element beam antenna out of the antenna segments of the Ringo if you had a piece of box tubing - antenna boom and a Gamma Match..

--
Channel Jumper

82. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-28 01:34:47 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <YAkNs.86396$qb3.7531@newsfe25.iad>
Source record: 255

Ok
So the 11 meter ringo wont work after shortening and tuning and pruning for 2m.

Other than making a beam out of it like you suggest, is there anything I can transform it into? I don't want it for cb, just 2m.

You are right, there is a lot more to know about making antennas then what I am doing, I wont dispute that.

I only want to know some good ideas or practical ideas for this clean antenna. Yes, I could buy a new antenna, but I don't want to.

Thanks,,

73s

"Channel Jumper" <Channel.Jumper.b4b69f8@radiobanter.com> wrote in message news:Channel.Jumper.b4b69f8@radiobanter.com...
>
> I think that everyone on this forum has missed the point.
> The op does not understand how antenna's works, is stuck in the CB radio
> and won't listen to reason.
>
> A 9' long Ringo is 6 meters - 50 MHz.
> It is also a 1/4 wave antenna for 27 MHz but will not work for 11
> meters, because the impedance is all wrong - almost 5:1 VSWR....
>
> When you shorten a antenna that is designed to work on another
> frequency, the design has to match in order for it to work and have the
> right impedance and be resonant.
>
> A full wave antenna, other then a dipole antenna is not a balanced
> load.
>
> The ring on the Ringo is the match, and the ring is around 32 inches
> long.
> You have to subtract 30 inches from the total length - which a resonant
> antenna would only be about 40 inches long.
>
> That doesn't leave much of a stub sticking up for a vertical radiator.
>
> I gave away a HALO antenna for two meters, for working SSB and digital
> modes and the diameter of it was only about 24 inches.
>
> Making a antenna is not as simple as just sticking something up in the

> air and connecting the coax to it and cutting off the excessive length
> and expecting it to work, like a mobile CB radio antenna.....
>
> Who was it that said, you can't fix stupid!
>
> Buy a 2 meter antenna, forget about trying to make something out of your
> CB radio crap to save a couple of bucks.
>
> What you could do is buy the ARRL antenna book and make a 4 element beam
> antenna out of the antenna segments of the Ringo if you had a piece of
> box tubing - antenna boom and a Gamma Match..
>
>
>
>
> --
> Channel Jumper
>

83. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-28 03:13:41 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <c3pbg8leeb2e90u38i3t3f41201lf7kcp2@4ax.com>
Source record: 256

On Sun, 27 Jan 2013 10:53:41 -0500, "Tom" <abraa@cadabraa.ca> wrote:

>But I want to hear some positive ideas. How can I make this work for 2m and
>70cm. I don't want a 10m omni.

You would probably do better loading a step ladder. However, if you insist, you can load just about anything if you can find a 50 ohm tap point with a gamma match. Attach a connector ground to the bottom of the element with a hose clamp. Put another hose clamp further up the antenna, which will later be moved up and down. Solder a series trimmer capacitor at the center pin of the connector. Add a length of bare wire between the trimmer cap and the 2nd hose clamp. Connect a directional coupler, SWR meter, or antenna analyzer to the connector. Adjust the length of the wire and the trimmer cap for minimum VSWR. The trimmer is used to resonate out the inductance of the length of wire. Anything that works at 2m, will sorta work at 440Mhz, but you can do better with a 2nd connector and tap. A coax balun is recommended.

If you want to get clever, and the lower end of the vertical element is insulated from ground, you can treat the antenna as a dipole, exactly as you would with a T-match. Same idea, except the connector is located at the midpoint of the antenna. A coax balun is recommended. You'll need to deploy the coax cable perpendicular to the antenna in order to prevent the coax cable proximity from wrecking the match.

I've actually built and modeled such abominations and worse. They all eventually tuned and matched. I've done flag poles, automobile trunks, step ladders, towers, barbed wire, chain link fences, and bicycles. Most were on commercial 30-50MHz/VHF/UHF frequencies. They all worked but only if you didn't care where the RF went. I modeled a few which showed truly bizarre radiation patterns and usable bandwidth. I found it handy to use a directional coupler (or reflection coefficient bridge), sweep generator, and scope instead of the common SWR meter so that I could see unexpected resonances and center the bandwidth over the desired operating frequency. I must admit that I've never tried to do a dual band random length antenna, but with two feeds, methinks it should be possible.

Now, on to something more practical. Use the CB antenna as a support structure for a better antenna with some gain. I call your attention to the AMOS/Franklin antenna, commonly used on 2.4GHz and cellular panel antennas:
<http://802.11junk.com/jeffl/antennas/> (see various AMOS models)
<http://www.qsl.net/yu1aw/ANT_VHF/Amos_Ant/amos_antennas.htm>

These are all 2.4 antennas, but scale nicely down to other frequencies. The required sheet metal reflector will be the existing CB antenna driven element. How you hang the added elements will be your problem. The 4:1 balun is required. The 4NEC2 models above are normalized to 2.4GHz. Find the GS card in the NEC file and change the 2442MHz to 146MHz and the model should work for 2 meters.

Now, if you're lazy and just want to get something on the air, use the CB antenna as a 102 inch "tower". Find a suitable VHF/UHF antenna and use a hose clamp to mount this antenna to the top of the CB antenna. You now have the benefit of altitude, which methinks is usually worth more than gain.

Good luck.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

84. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-28 03:34:35 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <JuydndCfd-9RbJjMnZ2dnUVZ_vadnZ2d@earthlink.com>
Source record: 257

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:c3pbg8leeb2e90u38i3t3f41201lf7kcp2@4ax.com...
> On Sun, 27 Jan 2013 10:53:41 -0500, "Tom" <abraa@cadabraa.ca> wrote:
>
>>But I want to hear some positive ideas. How can I make this work for 2m
>>and
>>70cm. I don't want a 10m omni.
>
> You would probably do better loading a step ladder. However, if you
> insist, you can load just about anything if you can find a 50 ohm tap
> point with a gamma match. Attach a connector ground to the bottom of
> the element with a hose clamp. Put another hose clamp further up the

The step ladder probably will work just as well as the full wavelength
vetical. More than likely the radiation patern will be vertical and only
good for working OSCAR.
As it is well known you can match just about anything to 50 ohms but that
does not mean it will radiate or atleast radiate in a desirable direction.

85. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-28 03:48:26 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <harbg89s90pc7o2nq1lpimv61mh88qjg9t@4ax.com>
Source record: 258

On Sun, 27 Jan 2013 21:36:14 +0000, Channel Jumper
<Channel.Jumper.b4b69f8@radiobanter.com> wrote:

>I think that everyone on this forum has missed the point.
>The op does not understand how antenna's works, is stuck in the CB radio
>and won't listen to reason.

Have you ever posted anything that didn't begin by insulting the
person you were allegedly trying to help? May I suggest you drop the
intro for no better reason than improving your credibility.

>A 9' long Ringo is 6 meters - 50 MHz.
>It is also a 1/4 wave antenna for 27 MHz but will not work for 11
>meters, because the impedance is all wrong - almost 5:1 VSWR....

The CB version of the Ringo Ranger is 7 meters (23 ft) long or 5/8
wave at 27Mhz. See link at bottom. It could best be used as an HF
vertical (with an antenna tuner).

>When you shorten a antenna that is designed to work on another
>frequency, the design has to match in order for it to work and have the
>right impedance and be resonant.

Half right. It should be the correct antenna, but not necessarily
resonant at the operating frequency. Minimum VSWR is not the same as
resonance. You can easily have minimum VSWR and still have some
reactive components left, while the definition of resonance is where
the inductive and capacitive components cancel, leaving a purely
resistive antenna impedance.

>A full wave antenna, other then a dipole antenna is not a balanced
>load.
>
>The ring on the Ringo is the match, and the ring is around 32 inches
>long.
>You have to subtract 30 inches from the total length - which a resonant
>antenna would only be about 40 inches long.
>
>That doesn't leave much of a stub sticking up for a vertical radiator.

Throw the ring match thing away.

>I gave away a HALO antenna for two meters, for working SSB and digital
>modes and the diameter of it was only about 24 inches.

Hmmm... Circumference = 24" * Pi = 75 inches = 1.9 meters. Ok, full
wave loop antenna.

>Making a antenna is not as simple as just sticking something up in the
>air and connecting the coax to it and cutting off the excessive length
>and expecting it to work, like a mobile CB radio antenna.....

Actually, making a piece of metal into an antenna is that simple, but
only if you understand how to match the transmitter impedance to the
antennas almost random impedance. See my comments to Tom in this
thread. However, convincing that antenna to direct its energies in a
useful direction is far more difficult.

>Who was it that said, you can't fix stupid!

They were wrong. Many stupid people have risen to high office and
position. Fixing the damage they've done is difficult, but still
possible with a change of administration.

>Buy a 2 meter antenna, forget about trying to make something out of your
>CB radio crap to save a couple of bucks.

That would probably be the easy way. However, learning and progress
has never followed the easy path.

>What you could do is buy the ARRL antenna book and make a 4 element beam
>antenna out of the antenna segments of the Ringo if you had a piece of
>box tubing - antenna boom and a Gamma Match..

Good idea, but I would hate to cut up an antenna worth $1500:
<http://articulo.mercadolibre.com.mx/MLM-410527401-antena-para-cb-de-base-ringo-ranger-con
-envio-gratis-_JM>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

86. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-28 04:15:17 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <69tbg8dcaeht9vq0n7g1euu92khjiq24ue@4ax.com>
Source record: 259

On Sun, 27 Jan 2013 22:34:35 -0500, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>
>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:c3pbg8leeb2e90u38i3t3f41201lf7kcp2@4ax.com...
>> On Sun, 27 Jan 2013 10:53:41 -0500, "Tom" <abraa@cadabraa.ca> wrote:
>>
>>>But I want to hear some positive ideas. How can I make this work for 2m
>>>and
>>>70cm. I don't want a 10m omni.
>>
>> You would probably do better loading a step ladder. However, if you
>> insist, you can load just about anything if you can find a 50 ohm tap
>> point with a gamma match. Attach a connector ground to the bottom of
>> the element with a hose clamp. Put another hose clamp further up the

>The step ladder probably will work just as well as the full wavelength
>vetical. More than likely the radiation patern will be vertical and only
>good for working OSCAR.

Well, the step ladder antenna came from what appears to be a
fabrication, where a loaded step ladder allegedly won an ARRL
sponsored antenna construction gain competition. I have my doubts,
but it was a good story. In the best Mythbusters tradition, I
produced a crude model of a fiberglass extension ladder section with
4NEC2 to see what could be done. I selected fiberglass because the
insulating fiberglass would not short the aluminum ladder rungs. At
this point, it's only a model and I haven't actually tested more than
the driven element matching.

If you don't mind, I would like to keep the details of how I did it
secret as I was considering writing an article on the topic.

>As it is well known you can match just about anything to 50 ohms but that
>does not mean it will radiate or atleast radiate in a desirable direction.

Yep.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

87. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-28 05:12:01 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-1CE590.00120128012013@5ad64b5e.bb.sky.com>
Source record: 260

In article <a4cNs.105419$EO2.46453@newsfe04.iad>,
"Tom" <abraa@cadabraa.ca> wrote:

> Any reason why I shouldn't shorten this ringo I have to 6ft 4in (full
> wavelength for 2m) ? Any reasons why I shouldn't use the gnd planes? How
> long should they be for that length omni?

Tom-

The reason you do not want a full wave antenna like this, is that it sends much of its energy up towards the sky instead of towards the horizon. The 5/8 wave antenna sends the maximum amount towards the horizon.

You could stack a half wave antenna on top of a 5/8 wave antenna with a proper phasing network. That might improve your signal towards the horizon.

Using radials for a ground plane is a good idea. I would make them each a quarter wave long.

Fred
K4DII

88. Re: 2m antenna home brew??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-28 13:14:36 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <0RuNs.131585$2v.62874@newsfe05.iad>
Source record: 261

Thank you all for the information,

Very interesting, I am not very good with the golden screwdriver, more of an appliance operator but love challenges and learning.

Appreciate every word of your expertise.

This project will fly. Now I am studying coax because I will go down to the local supplier (25miles to the only supplier locally) for some coax. This has been the discussion on our local vhf band. You chaps would love it or I wish you were in the chats. Everyone around here has different ideas on coax. I wont open that can of worms but all I can find available is the RG8U that is 13 awg center. Hard foam insulation with foil and then 95% braiding. This coax is a bit larger o.d. which makes it a much much tighter and snugger fit into the ends. Actually it is the only product around, little pricy at .45 Cents per foot. I like its size, I didn't want that big think bulky coax because I always run QRP and like the flexibility and availablility. I been reading all the charts that show so much loss at so many feet at which ever frequency at what ever power. All trivial for me because minimal, all important for you guys with your calculations, engineering, long lengths and designs for commercial or military or maximum efficient uses.

I think I have a winner with this coax that is really all I can find locally, I was wondering about that 13awg center, stranded. Everywhere else seems to be 18 ga or 20 ga. All thinner. My line of thinking is that I already have the 13ga in my system. I made a bunch of jumper from it, the short pieces from rig to tuner or meter, so I wanted to keep it all the same guage.

Am I thinking this out properly? Can you gents tell me your thoughts on coax? I don't need to know how its made, just recommendations or suppliers who sell online the best stuff. I appreciate your expertise.

Thanks

73s

"Fred McKenzie" <fmmck@aol.com> wrote in message
news:fmmck-1CE590.00120128012013@5ad64b5e.bb.sky.com...
> In article <a4cNs.105419$EO2.46453@newsfe04.iad>,
> "Tom" <abraa@cadabraa.ca> wrote:
>
>> Any reason why I shouldn't shorten this ringo I have to 6ft 4in (full
>> wavelength for 2m) ? Any reasons why I shouldn't use the gnd planes? How
>> long should they be for that length omni?
>

> Tom-
>
> The reason you do not want a full wave antenna like this, is that it
> sends much of its energy up towards the sky instead of towards the
> horizon. The 5/8 wave antenna sends the maximum amount towards the
> horizon.
>
> You could stack a half wave antenna on top of a 5/8 wave antenna with a
> proper phasing network. That might improve your signal towards the
> horizon.
>
> Using radials for a ground plane is a good idea. I would make them each
> a quarter wave long.
>
> Fred
> K4DII
>

89. Re: German quad

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-29 12:52:55 UTC
From: "J.B. Wood" <john.wood@nrl.navy.mil>
Message-ID: <ke8gn7$38d$1@ra.nrl.navy.mil>
Source record: 262

On 01/27/2013 03:05 AM, Ben wrote:
> Sometimes the horizontal loop antenna is referred to as "the german
> quad". Does anybody know why?
>
Hello, try Googling and you'll find your answer. Sincerely, and 73s
from N4GGO,

--
J. B. Wood e-mail: arl_123234@hotmail.com

90. HOT VIDEOS FOR YOUTH AND ALL ADULT PEOPLE 2013 SEXY PHOTOS

Newsgroup: rec.radio.amateur.antenna
Date: 2013-01-31 13:25:37 UTC
From: 866434 <iashjbbxdhvv@gmail.com>
Message-ID: <a71ce68a-2668-4f0e-819c-bf974b471612@d2g2000pbd.googlegroups.com>
Source record: 263

TOLLYWOOD HOT
http://tbiphotos.blogspot.in/2013/01/tollywood-hot.html
TAMIL HOT
http://tbiphotos.blogspot.in/2013/01/tamil-hot.html
MALLU HOT
http://tbiphotos.blogspot.in/2013/01/mallu-hot.html
BOLLYWOOD HOT
http://tbiphotos.blogspot.in/2013/01/bollywood-hot.html
INDIAN HOT
http://tbiphotos.blogspot.in/2013/01/indian-hot.html
MALLU KISS
http://tbiphotos.blogspot.in/2013/01/mallu-kiss.html
TOLLYWOOD KISS
http://tbiphotos.blogspot.in/2013/01/tollywood-kiss.html
TAMIL LIP KISS
http://tbiphotos.blogspot.in/2013/01/tamil-lip-kiss.html
BOOLYWOOD LIP KISS
http://tbiphotos.blogspot.in/2013/01/boolywood-lip-kiss.html
INDIAN LIP KISS
http://tbiphotos.blogspot.in/2013/01/indian-lip-kiss.html
INDIAN REAL LIP KISS
http://tbiphotos.blogspot.in/2013/01/indian-real-lip-kiss.html

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dotnet questions 3
http://allinterviewsquestions.blogspot.in/2009/02/dotnet-questions-3.html

91. Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-01 05:52:10 UTC
From: Michiel Kappeyne <Michiel.Kappeyne.b5158b8@radiobanter.com>
Message-ID: <Michiel.Kappeyne.b5158b8@radiobanter.com>
Source record: 265

Hi all,

New to this forum, I am so impressed with the level of expertise I find here.

Thanks for welcoming me.

I want to build a Slim Jim antenna for receiving airband (118-136MHz) out of 3/8" or 1/2" soft copper tubing. This antenna won't see any ouside use--it will hang away from any metal against my window facing the Hudson River towards Newark Airport, 15 miles away. Amzingly, my little 8" helical rubber duck works as well as a ladder cable-based 125MHz Slim Jim I bought, so I want to step it up...!

There are many, many stories floating around the Internet about homebrew Slim Jim projects, but what strikes me is that everybody seems to arrive at different lengths for a 3/4 wave in the 144MHz band (where I find most Slim Jims), even allowing for differing propagation speeds in the various materials these builders use. What am I missing here? I thought the calculation was as straightforward as the wave length in open air adjusted by the velocity factor, about 0.96 for copper tubing. My antenna should center around 125MHz, as the most interesting frequencies, Tower, Ground, tend to group at the lower end of the airband spectrum.

I understand that the bigger the diameter of the tubing is, the wider the antenna's bandwidth. What would be a good trade-off diameter? Will the resulting bandwidth be good enough?

I am leaning towards 3/8" as happy medium, unless one of you tells me I'm crazy.

Anyway, I won't solder any elbows at the two ends; I will loop this tubing using a bending spring. Should I compensate for these round ends in my length calculations, or won't that matter? How critical is the distance between the two parallel sides? I can't find any information on that either. Can I leave the air gap bare, or should I treat the tube endings to some kind of solid, perhaps adjustable, plug?

I'll devise a slide for the coax connection so I can adjust it for best matching.

I am a complete novice when it comes to building antennas, and for now can only contribute my thanks for your advice.

Cheers,
Michael

--
Michiel Kappeyne

92. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-01 07:00:02 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1359702000@panix.com>
Source record: 264
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted twice monthly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

93. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-01 15:21:46 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <teOdnVf6MdQWQJbMnZ2dnUVZ_oudnZ2d@earthlink.com>
Source record: 266

"Michiel Kappeyne" <Michiel.Kappeyne.b5158b8@radiobanter.com> wrote in
message news:Michiel.Kappeyne.b5158b8@radiobanter.com...
> I want to build a Slim Jim antenna for receiving airband (118-136MHz)
> out of 3/8" or 1/2" soft copper tubing. This antenna won't see any
> ouside use--it will hang away from any metal against my window facing
> the Hudson River towards Newark Airport, 15 miles away. Amzingly, my
> little 8" helical rubber duck works as well as a ladder cable-based
> 125MHz Slim Jim I bought, so I want to step it up...!
>
> There are many, many stories floating around the Internet about homebrew
> Slim Jim projects, but what strikes me is that everybody seems to arrive
> at different lengths for a 3/4 wave in the 144MHz band (where I find
> most Slim Jims), even allowing for differing propagation speeds in the
> various materials these builders use. What am I missing here? I thought
> the calculation was as straightforward as the wave length in open air
> adjusted by the velocity factor, about 0.96 for copper tubing. My
> antenna should center around 125MHz, as the most interesting
> frequencies, Tower, Ground, tend to group at the lower end of the
> airband spectrum.
>
> I understand that the bigger the diameter of the tubing is, the wider
> the antenna's bandwidth. What would be a good trade-off diameter? Will
> the resulting bandwidth be good enough?
>
> I am leaning towards 3/8" as happy medium, unless one of you tells me
> I'm crazy.
>
> Anyway, I won't solder any elbows at the two ends; I will loop this
> tubing using a bending spring. Should I compensate for these round ends
> in my length calculations, or won't that matter? How critical is the
> distance between the two parallel sides? I can't find any information on
> that either. Can I leave the air gap bare, or should I treat the tube
> endings to some kind of solid, perhaps adjustable, plug?
>
> I'll devise a slide for the coax connection so I can adjust it for best
> matching.
>
> I am a complete novice when it comes to building antennas, and for now
> can only contribute my thanks for your advice.
>
> Cheers,
> Michael

In simple terms the velocity factor of the antenna is determined by the insulating material around the antenna.
There is another factor called the diameter to wavelength. That is how big around the antenna is. That number usually runs from .94 to .98. The larger the diameter the antenna is in relationship to the wavelength will shorten the antenna also. When you go from a wire such as twin lead to copper tubing for the slim jim there is a big ratio change. The graph here may help you see that effect.
http://www.radio-electronics.com/info/antennas/dipole/length-calculation-formula.php

So not only does the diameter effect the bandwidth, it also effects the length.
For receiving I doubt that you will notice much differance in the bandwidth as far as the signal strength going from a piece of number 14 wire to 3/8 inch tubing.

94. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-01 18:49:27 UTC
From: Channel Jumper <Channel.Jumper.b520178@radiobanter.com>
Message-ID: <Channel.Jumper.b520178@radiobanter.com>
Source record: 267

Public service radio - aircraft bands - are transmitted with massive amounts of power. Not to mention the fact that the airplanes are in the air when they are mainly transmitting. Not that there is much traffic to listen to anymore, with most things being computerized and digital.

There is no reason to use a 3/4 wave antenna, nor is there any benefit in using a antenna more then 5/8 wave long.

Might I suggest you get a copy of the ARRL antenna book, it will cover it better then I can.

The bottom line is - if all you want to listen to is local traffic, all you need is a 1/4 wave antenna - mounted outside, in as clear of a place as possible.
Some building materials - concrete reinforced steel - being one, is opaque to good radio reception.

All effective communications is line of sight.

The best scanner antenna for the money would be a Diamond Discone type antenna - which would cover anything from 10 meters to 999 MHz - all in one antenna.

Using a good high grade coax and connectors would be key to good reception.

As a example, Cleveland Approach is 120 miles from my location, with my Uniden 890XLT - I can hear Cleveland approach and the air traffic between Cleveland / Pittsburgh and Baltimore MD from my location in Central PA.

Not to mention the local air traffic.

Even a old VHF television antenna would get you some reception...

Copper J Poles are great for experimental purposes, but not real good when it comes to reliable reception - even though you are just going to use it inside of your house.
They do offer some front to back - directivity in one or more directions, but there is no reason to use a piece of copper pipe if all you want to do is receive.

You can acheive practically the same thing with a piece of 300 ohm twin lead - if assembled properly.

I have even seen antenna's that were made out of copper foil that worked for what you want to do.

--
Channel Jumper

95. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-01 23:35:14 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <i20ut9-4ao.ln1@mail.specsol.com>
Source record: 268

Channel Jumper <Channel.Jumper.b520178@radiobanter.com> wrote:
>
> Public service radio - aircraft bands - are transmitted with massive
> amounts of power.

No they are not. Most aircraft radios are around 10 watts and ground
stations around 25 watts.

> Not to mention the fact that the airplanes are in the
> air when they are mainly transmitting.

Pretty much correct.

> Not that there is much traffic
> to listen to anymore, with most things being computerized and digital.

Nope, aircraft communications is still AM voice and there is lots of it.

> There is no reason to use a 3/4 wave antenna, nor is there any benefit
> in using a antenna more then 5/8 wave long.
>
> Might I suggest you get a copy of the ARRL antenna book, it will cover
> it better then I can.
>
> The bottom line is - if all you want to listen to is local traffic, all
> you need is a 1/4 wave antenna - mounted outside, in as clear of a place
> as possible.
> Some building materials - concrete reinforced steel - being one, is
> opaque to good radio reception.
>
> All effective communications is line of sight.

Well, you got something right anyway.

> The best scanner antenna for the money would be a Diamond Discone type
> antenna - which would cover anything from 10 meters to 999 MHz - all in
> one antenna.

Giant overkill just to listen to airplanes.

> Using a good high grade coax and connectors would be key to good
> reception.

Actually, if the goal is to hear ground stations, the key is antenna
height.

> As a example, Cleveland Approach is 120 miles from my location, with my
> Uniden 890XLT - I can hear Cleveland approach and the air traffic

> between Cleveland / Pittsburgh and Baltimore MD from my location in
> Central PA.

You do know that things like Approach are not usually on the airport.

> Not to mention the local air traffic.

You normally hear lots of air traffic but not the ground station.

> Even a old VHF television antenna would get you some reception...
>
> Copper J Poles are great for experimental purposes, but not real good
> when it comes to reliable reception - even though you are just going to
> use it inside of your house.

There is nothing about a J pole that makes in unrealiable for reception
though it is again overkill for the application.

> They do offer some front to back - directivity in one or more
> directions, but there is no reason to use a piece of copper pipe if all
> you want to do is receive.

There is no reason to use anything other than a piece of coax with the
center conductor stripped out for about 20 inches for receive.

> You can acheive practically the same thing with a piece of 300 ohm twin
> lead - if assembled properly.
>
> I have even seen antenna's that were made out of copper foil that worked
> for what you want to do.

For listening at home with my aviation HT, I use a piece of RG-58 that
has the shield pulled back about 20 inches with about 20 inches of center
conductor exposed. The end of the center conductor is soldered into a small
loop so I can hang the thing from the ceiling with a piece of string.

96. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-01 23:46:41 UTC
From: Me <me@shadow.orgs>
Message-ID: <me-56D403.14463201022013@news.starband.net>
Source record: 269

In article <Channel.Jumper.b520178@radiobanter.com>,
Channel Jumper <Channel.Jumper.b520178@radiobanter.com> wrote:

> Public service radio - aircraft bands - are transmitted with massive
> amounts of power.

You are an IDIOT, and your understanding of FAA Comms is ludicrous at best. Most FAA Ground Transmitters are less than 100 Watts Output, and Aircraft Radios are usually in the 25 to 50 watt Range, for Commercial and 10 to 25 Watts for General Aviation Aircrat. All UniCom and MultiCom Transmitters are 10 watts, unless an STA has been granted for some very unusual reason. If you consider this "MASSIVE" you are a double Idiot....

Me One who actually KNOWS something about the subject.....

97. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-01 23:56:13 UTC
From: nm5k@wt.net
Message-ID: <0ec0b7f1-0e7a-417f-b77c-8837d3c8b276@googlegroups.com>
Source record: 270

On Thursday, January 31, 2013 11:52:10 PM UTC-6, Michiel Kappeyne wrote:

> I want to build a Slim Jim antenna for receiving airband (118-136MHz)
>
> out of 3/8" or 1/2" soft copper tubing.

I'm not really a fan of those type of antennas. You would
likely be as well off to just make a simple 1/4 ground plane
with sloping radials. Easy match to coax, and super easy to
build. Can be as simple as a SO-239 connector with 5 stiff
wires attached.
All the bandwidth issues, etc are not worth worrying about
for receiving. You will likely never hear the difference
between a vertical length of wire, vs a fat copper tube
for receiving air band.
Another issue with most J-poles, and other antennas of it's
ilk are the total lack of decoupling from the feed line.
There is no point in worrying about extra gain or bandwidth,
when the design of the antenna does not take decoupling of
the feed line into consideration. The lack of decoupling will
skew the pattern up off the horizon, and make any extra gain
from a longer element length apply only to higher angles.
This could be good for airplanes in flight, but bad for
tower comms.
The decoupling of a 1/4 ground plane is not perfect, but it's
generally a good bit better than the usual J pole.
And it can be improved by adding more radials, or an extra
set of radials 1/4 wave below the feed.

Myself, I would just build a simple SO-239 ground plane,
"google for illustrations", hang up from the ceiling with
a short piece of fishing line and a tack, and be done with it.
It will likely function as well as most of the J pole designs,
with a lot less work involved. And it's a direct match to
coax, which means no matching losses. The sloping radial
version is a better match, than one with the radials at
90 degrees from the vertical element. And the gain of the
sloping radial ground plane will usually be within .3 db
of a 1/2 wave vertical. And this assumes the 1/2 wave is
properly decoupled. Most are not.. So it would not be totally
unusual to see the simple ground plane actually do better
in many cases.
If one is going to use a 1/2 wave vertical for VHF, one
needs to take decoupling of the feed line into consideration.
Most don't it seems.. :(

98. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-02 01:40:14 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <vioog85sabhp4gcdvst6v0q5ebfvbqec4s@4ax.com>
Source record: 271

On Fri, 1 Feb 2013 05:52:10 +0000, Michiel Kappeyne
<Michiel.Kappeyne.b5158b8@radiobanter.com> wrote:

>New to this forum, I am so impressed with the level of expertise I find
>here.

Oh-oh. We're in trouble now.

>I want to build a Slim Jim antenna for receiving airband (118-136MHz)
>out of 3/8" or 1/2" soft copper tubing. This antenna won't see any
>ouside use--it will hang away from any metal against my window facing
>the Hudson River towards Newark Airport, 15 miles away. Amzingly, my
>little 8" helical rubber duck works as well as a ladder cable-based
>125MHz Slim Jim I bought, so I want to step it up...!

Altitude will get you better results than gain in this case. The idea
is to get over the ground clutter so that you can hear aircraft and
service vehicles on the ground. 15 miles is a bit of a stretch but
possible. The trick is to create an antenna that will hear well
overhead but also has most of the gain in the direction of the
airport. Presumably, your station and the airport are not moving.

What I suggest is an aircraft band yagi antenna pointed at the
airport. That should take care of the ground stations. However, that
does nothing for hearing airplanes flying overhead. For that, I
suggest a simple coaxial antenna, as Jim Lux has suggested. A length
of coax with 1/4 wave of braid peeled back over the coax will sorta
work. If you want something better, a simple 1/4 wave ground plane
antenna or a horizontal 1/2 wave dipole. Don't bother with a J-Pole,
Slim Jim, or anything with gain. The problem is that such antennas
"borrow" gain from the upwards direction, and use it to improve gain
at the horizon. That's NOT what you want for the "overhead" antenna.
Obviously, it is necessary to combine the two antennas. A Wilkinson
combiner will have about 1dB loss on receive, which can be easily
tolerated.
<https://www.google.com/search?q=wilkinson+combiner&tbm=isch>
One potential problem is that if both antennas receive the same signal
180 degrees otto phase, there will be cancellation. To reduce (but
not eliminate) this problem, try to position the overhead antenna
where the path to the airport is blocked by some obstruction (i.e.
chimney).

>There are many, many stories floating around the Internet about homebrew
>Slim Jim projects, but what strikes me is that everybody seems to arrive
>at different lengths for a 3/4 wave in the 144MHz band (where I find
>most Slim Jims), even allowing for differing propagation speeds in the

>various materials these builders use. What am I missing here?

The diameter of the elements has some effect on the cut length. So does spacing between elements, coax impedance, where they're measuring from, and how the end of the elements are cut. For example, a square cut tubing will have a different effective length than one with the end crimped and rounded, or with a hemispherical shaped end cap. The idea behind the non-square tubing end is to increase the usable bandwidth of the antenna.

>I thought
>the calculation was as straightforward as the wave length in open air
>adjusted by the velocity factor, about 0.96 for copper tubing.

Calculations are nice, but when it comes to actually sweeping an antenna for where the minimum VSWR is located, I often get surprises. If you had a sweep generator, direction coupler, detector, and scope, you could see the VSWR sweep change as the antenna is waved around. The calculations are generally under near ideal conditions. Real installation tend to be not so ideal.

>My
>antenna should center around 125MHz, as the most interesting
>frequencies, Tower, Ground, tend to group at the lower end of the
>airband spectrum.

Yep. However, I think you'll find that with a receive only antenna, you can have quite a bit of VSWR and it will still work just fine. Therefore, the antenna cuts and trims are far less critical for a receive antenna than one that's also used for transmit. You might be trying to over-optimize the design without any obvious benefit.

>I understand that the bigger the diameter of the tubing is, the wider
>the antenna's bandwidth.

True.

>What would be a good trade-off diameter? Will
>the resulting bandwidth be good enough?

Well, the -3dB bandwidth of the aircraft band is about:
20/150 = 0.15 = 15%
The -3db bandwidth of my 2m J-Pole is about:
<http://802.11junk.com/jeffl/crud/144-Jpole-50-VSWR.jpg>
17/146 = 0.08 = 12%
I could recalculate the antenna for 125Mhz, but I'm lazy. The percent bandwidth at 125 would be the same as at 146Mhz. The smaller bandwidth for the J-Pole would seem to be a problem, but isn't because receiver can tolerate a higher VSWR without (much) loss in gain.

>I am leaning towards 3/8" as happy medium, unless one of you tells me
>I'm crazy.

You're crazy. How will you know that your antenna is actually optimized? Without test equipment, you don't have much of a chance. Better to build something really simple, where the tolerances are not as important or critical.

>Anyway, I won't solder any elbows at the two ends; I will loop this
>tubing using a bending spring. Should I compensate for these round ends
>in my length calculations, or won't that matter? How critical is the
>distance between the two parallel sides? I can't find any information on
>that either. Can I leave the air gap bare, or should I treat the tube
>endings to some kind of solid, perhaps adjustable, plug?

The only way I know how to make sure your estimates are correct is to either construct an NEC2 model, or to just build it and measure the antenna gain and VSWR. Since a computer model tends to be less expensive than copper, methinks that would be best.

>I'll devise a slide for the coax connection so I can adjust it for best
>matching.

Cut-n-Try? Well, good luck.

>I am a complete novice when it comes to building antennas, and for now
>can only contribute my thanks for your advice.

Well, you're off to a bad start. Got any RF test equipment?

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

99. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-02 22:46:41 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <9Yk6dsVRdZDRFwRK@g3ohx.demon.co.uk>
Source record: 272

In message <Michiel.Kappeyne.b5158b8@radiobanter.com>, Michiel Kappeyne
<Michiel.Kappeyne.b5158b8@radiobanter.com> writes
>
>Hi all,
>
>New to this forum, I am so impressed with the level of expertise I find
>here.
>
>Thanks for welcoming me.
>
>I want to build a Slim Jim antenna for receiving airband (118-136MHz)
>out of 3/8" or 1/2" soft copper tubing. This antenna won't see any
>ouside use--it will hang away from any metal against my window facing
>the Hudson River towards Newark Airport, 15 miles away. Amzingly, my
>little 8" helical rubber duck works as well as a ladder cable-based
>125MHz Slim Jim I bought, so I want to step it up...!
>
>There are many, many stories floating around the Internet about
>homebrew
>Slim Jim projects, but what strikes me is that everybody seems to
>arrive
>at different lengths for a 3/4 wave in the 144MHz band (where I find
>most Slim Jims), even allowing for differing propagation speeds in the
>various materials these builders use. What am I missing here? I thought
>the calculation was as straightforward as the wave length in open air
>adjusted by the velocity factor, about 0.96 for copper tubing. My
>antenna should center around 125MHz, as the most interesting
>frequencies, Tower, Ground, tend to group at the lower end of the
>airband spectrum.
>
>I understand that the bigger the diameter of the tubing is, the wider
>the antenna's bandwidth. What would be a good trade-off diameter? Will
>the resulting bandwidth be good enough?
>
>I am leaning towards 3/8" as happy medium, unless one of you tells me
>I'm crazy.
>
>Anyway, I won't solder any elbows at the two ends; I will loop this
>tubing using a bending spring. Should I compensate for these round ends
>in my length calculations, or won't that matter? How critical is the
>distance between the two parallel sides? I can't find any information
>on
>that either. Can I leave the air gap bare, or should I treat the tube
>endings to some kind of solid, perhaps adjustable, plug?

>
>I'll devise a slide for the coax connection so I can adjust it for best
>matching.
>
>I am a complete novice when it comes to building antennas, and for now
>can only contribute my thanks for your advice.
>
Some of the guys in this NG seem to be making things unnecessarily
complicated and confusing.

The Slim Jim / J-Pole is essentially just a halfwave, endfed via a
quarterwave stub (in HF terms, a "Zepp" antenna). It's a pretty good
antenna. For receiving, the dimensions shouldn't be that critical.
However, a quick Google brings up this calculator:
http://www.m0ukd.com/Calculators/Slim_Jim/index.php
--
Ian

100. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-03 00:10:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rb8rg850gba1fdhc645gd619074o8kjjg7@4ax.com>
Source record: 273

On Sat, 2 Feb 2013 22:46:41 +0000, Ian Jackson
<ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:

>Some of the guys in this NG seem to be making things unnecessarily
>complicated and confusing.

That would be me. Thanks.

>The Slim Jim / J-Pole is essentially just a halfwave, endfed via a
>quarterwave stub (in HF terms, a "Zepp" antenna).

Sorta. The original Zepp antenna was intended for use on a Zeppelin
dirigible, because the entire antenna is at DC ground and the voltage
peak is as far away from the gas bags as possible. It was in the form
of a J-Pole, with the 5/8 wave section dangling downward. I just
Googled for pictures of Zeppelins but never found one showing a
trailing Zepp antenna.

I don't have a clue how the Slim Jim design arrived, but my guess(tm)
is that it coincided when people started making J-Poles out of
twinlead, and found that the extra wire would be tolerated. Using
Google (search by date range), it seems to have arrived in about 1990.

>It's a pretty good antenna.

I prefer a folded dipole and balun or a collinear dipole (as in
AMOS/Franklin) and balun antenna. I consider the complexity of
construction about the same, although I will concede that end fed
antennas are much easier to mount than center feed antennas.

>For receiving, the dimensions shouldn't be that critical.

Agreed. You could make the antenna out of barbed wire and it will
work. The problem is that you won't know how good or bad the antenna
operates without measurements, simulations, or comparisons. For
comparison, I carry a simple telescoping dipole with me. When someone
claims that they're "system" isn't working well, I compare it with the
dipole. I'm often impressed with the ability of some antennas (mostly
mobile antennas) to send most of the RF towards the sky, while leaving
little towards the horizon. However, that shouldn't matter here,
where a hemispherical pattern, that covers the entire sky, is the
goal. Maybe a discone?

>However, a quick Google brings up this calculator:
>http://www.m0ukd.com/Calculators/Slim_Jim/index.php

Ahem. Although the author mentions using twinlead and ladder line,
there's nothing in the calculator to compensate for the velocity

factor. The design shown is apparently for one built out of rod and tubing.

Incidentally, our local radio club (K6BJ) had an antenna construction session during the Oct 2011 meeting. The theme was how to build an emergency antenna. The Slim Jim variety was the most common form. There were numerous construction articles found online and in books and magazines. Various pieces of test equipment were available. I didn't participate because I wasn't sure I would arrive on time, but eventually showed up near the end. I could almost cry. Most of the antennas were hung from the suspended ceiling, which was metal. The most sensitive point of the Slim Jim is near the top, causing frequency sweeps to change drastically when moved. Several people used the same design, the same roll of ladderline, but had various interpretations of how to cut the antenna. That had some effect on VHF, but was fatal at UHF. I gave a fast demonstration of how proximity to metal, and construction variables can have a big effect. There was plenty of head scratching and head shaking, but eventually everyone threw together something that worked. I had an entertaining diversion diagnosing a very nicely built Slim Jim, that had conductive shrink tube slipped over the gap. The meeting was over before I had a chance to connect these antennas to an HT and run a live test to a distant repeater. My guess(tm) is that they wall would have worked, but to varying degrees.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

101. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-03 03:41:03 UTC
From: nm5k@wt.net
Message-ID: <36cb80ba-ba49-489a-a018-1c26101333ef@googlegroups.com>
Source record: 274

On Saturday, February 2, 2013 6:10:44 PM UTC-6, Jeff Liebermann wrote:
I'm often impressed with the ability of some antennas (mostly
>
> mobile antennas) to send most of the RF towards the sky, while leaving
>
> little towards the horizon. However, that shouldn't matter here,
>
> where a hemispherical pattern, that covers the entire sky, is the
>
> goal. Maybe a discone?

Dunno.. I've done a lot of air band listening, and myself, I
think it's best to concentrate of the tower, and letting the
airborne chips fall as they may. Unless one is real close to
the airport, the tower, ATIS, and other ground signals will
usually be the toughest to hear.
The idea of using a *short* yagi actually works quite well in
most cases. You can hear the ground stations, and still most
of the others in the air also. Most of the airborne signals
will be fairly stout, and a rubber ducky would pick them up.
The more gain the yagi has, and the tighter the pattern,
the better the tower, but the worse the airborne.
This is why I would stick with short 2-3 el yagi's if going
that route. You don't want too much gain.

I've got a simple 3 el yagi cut for 2m, and I'd often use
it for air band. I could tweak the direction for best tower
signals, and with the antenna out of tune, the pattern is
not sharp, and would pick up most everything well enough.

Using that, I could receive ACARS from cruising jets up to
about 300 miles. From Houston, to about the OK border or so..
I could follow Southwest jets from KHOU to KDAL, and I could
hear them going into Dallas until they descended to about 9000
feet or so. And that's with the 2m yagi in no particular direction,
or aimed to favor Hobby.. With an out of tune yagi, sometimes
the max signal does not jive with the normal direction..

Anyway, I've found that it's best to favor the ground signals,
and not worry much about airborne. You will hear those with
little trouble. And this is the main reason I take the
decoupling into consideration if using a simple vertical.
You will want good decoupling to do well on the low angle
ground signals. A sky warmer will not be your friend in this
case.

102. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-04 02:25:15 UTC
From: Michiel Kappeyne <Michiel.Kappeyne.b54f8d8@radiobanter.com>
Message-ID: <Michiel.Kappeyne.b54f8d8@radiobanter.com>
Source record: 275

Thank you very much for all your responses! The spectrum of thought, and wide array of opinions, are fascinating and educational.

There are clearly several roads that lead to Rome.

Distilling the narrative I extract the following:

- Antenna height dominates. It is hence a good thing I live in a Manhattan apartment building at 250ft elevation, with a large window facing West and an unobstructed view of New Jersey. (Of course I can forget about listening to JFK or LGA.)

- With neither antenna-building expertise nor dedicated rf measuring equipment, it is better to stick to a straightforward design such as a dipole or Yagi with two or three elements, or even a piece of coax, where dimensions either require less precision or can be realized more easily. I'll definitely continue the experimentation. And oh, toss my copper tubing lunacy...!

- Even so, I should not expect jaw-dropping improvement over my airband rubber duck or even the $30 ladder line Slim Jim I bought. After moving that around a bit it's working quite well now and pulls in airplanes taxiing around Newark Airport, 11 miles out, depending on atmospheric conditions. Newark Tower, which transmits with more power at higher elevation, comes in intelligibly most of the time. Both the Slim Jim, its horizontal gain notwithstanding, and the duck capture nearby airplanes up to 8,000 ft or so. Most air-to-ground communications are at lower altitudes anyway.

Many thanks again for all your comments! I'll post updates to this thread in case anybody is interested in my novice attempts.

Cheers,
Michiel

P.S. On a different note, I'll be putting a perfectly restored Sony Pro80 in as-new operational and cosmetic condition on eBay in the next couple of weeks.

Michiel Kappeyne;801269 Wrote:
> Hi all,
>
> New to this forum, I am so impressed with the level of expertise I find
> here.
>
> Thanks for welcoming me.
>

> I want to build a Slim Jim antenna for receiving airband (118-136MHz)
> out of 3/8" or 1/2" soft copper tubing. This antenna won't see any
> ouside use--it will hang away from any metal against my window facing
> the Hudson River towards Newark Airport, 11 miles away. Amazingly, my
> little 8" helical rubber duck works as well as a ladder cable-based
> 125MHz Slim Jim I bought, so I want to step it up...!
>
> There are many, many stories floating around the Internet about homebrew
> Slim Jim projects, but what strikes me is that everybody seems to arrive
> at different lengths for a 3/4 wave in the 144MHz band (where I find
> most Slim Jims), even allowing for differing propagation speeds in the
> various materials these builders use. What am I missing here? I thought
> the calculation was as straightforward as the wave length in open air
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> that either. Can I leave the air gap bare, or should I treat the tube
> endings to some kind of solid, perhaps adjustable, plug?
>
> I'll devise a slide for the coax connection so I can adjust it for best
> matching.
>
> I am a complete novice when it comes to building antennas, and for now
> can only contribute my thanks for your advice.
>
> Cheers,
> Michael

--
Michiel Kappeyne

103. Re: Building Slim Jim for Air Band

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-04 18:49:49 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <6800h8pm8v4687rqbb34h8v4p5ra0577bc@4ax.com>
Source record: 276

On Mon, 4 Feb 2013 02:25:15 +0000, Michiel Kappeyne
<Michiel.Kappeyne.b54f8d8@radiobanter.com> wrote:

>- Antenna height dominates. It is hence a good thing I live in a
>Manhattan apartment building at 250ft elevation, with a large window
>facing West and an unobstructed view of New Jersey. (Of course I can
>forget about listening to JFK or LGA.)

Ummm... you may have a different problem. Presumably, you're using an
indoor antenna as I doubt the windows open at the 250ft level. For
energy efficiency, such windows are coated with Titanium Dioxide and
other metallic coating designed to reflect infrared to improve the
energy efficiency of the HVAC system. Unfortunately, they also block
RF to varying degrees. If you're experiencing somewhat weak
reception, it might be the Low-E coating. Unless you can arrange for
antenna on the rooftop (unlikely), I can't offer a solution.

>P.S. On a different note, I'll be putting a perfectly restored Sony
>Pro80 in as-new operational and cosmetic condition on eBay in the next
>couple of weeks.

Good luck.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

104. Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-06 12:32:23 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <q3sQs.75489$uU.7908@newsfe11.iad>
Source record: 277

Hi all

Now I need a recommendation for a 2m 70cm base antenna. This will go right at the top of a 50ft tower. My ringo 2m modification antenna didn't pan out too well. I could get low SWR on some freq but I want a wider range of work. If that is possible. I also use it for 156 megs (Marine band).

I am looking at the utubes of dual band antennas for home, I like the UVS-300.

Can anyone make a recommendation for the purchase of a dual band antenna? I would also like to use it as a SWL antenna as I listen a lot on all bands. This antenna will be verticle and right at the top of the tower. I am hoping to spend about 200 dollars.

Thanks for any comments,

105. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-06 22:08:02 UTC
From: Channel Jumper <Channel.Jumper.b5898f8@radiobanter.com>
Message-ID: <Channel.Jumper.b5898f8@radiobanter.com>
Source record: 278

'Tom[_8_ Wrote:
> ;801430']Hi all
>
> Now I need a recommendation for a 2m 70cm base antenna. This will go
> right
> at the top of a 50ft tower. My ringo 2m modification antenna didn't pan
> out
> too well. I could get low SWR on some freq but I want a wider range of
> work.
> If that is possible. I also use it for 156 megs (Marine band).
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> I am looking at the utubes of dual band antennas for home, I like the
> UVS-300.
>
> Can anyone make a recommendation for the purchase of a dual band
> antenna? I
> would also like to use it as a SWL antenna as I listen a lot on all
> bands.
> This antenna will be verticle and right at the top of the tower. I am
> hoping
> to spend about 200 dollars.
>
> Thanks for any comments,

The antenna of choice is the Diamond X 510 fed with Belden 9913 or LMR
400

Ringo's are nothing more then a over glorified dummy load..

Second choice would be a Diamond V2000 if you also wanted to include 6
meters.....

On two meters FM - I have talked up to 1500 miles when the bands were
open with the Diamond V2000 and frequently talk 50 / 75 miles in the
mountains of western Pennsylvania - although my elevation helps a
little.

I am at 1400' amsl - 60 miles west of State College and 65 miles east of
Pittsburgh and I can talk and listen - north, south, east and west
about 50 miles full quieting.

--
Channel Jumper

106. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-07 07:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1360220700@panix.com>
Source record: 279
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.2 2009/11/25 14:41:01
Posting-Frequency: posted twice monthly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

One significant omission, requiring immediate updates, for this article |
is that it does not mention newer amateur radio newsgroups created since |
it was written, including: |

rec.radio.amateur.antenna |
rec.radio.amateur.boatanchors |
rec.radio.amateur.dx |
rec.radio.amateur.equipment |
rec.radio.amateur.homebrew |
rec.radio.amateur.moderated |
rec.radio.amateur.space |

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:
```

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.

107. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-07 08:10:11 UTC
From: "Helmut Wabnig"
Message-ID: <d6o6h8lmfqbvton5lctkikrt7cdqq9baup@4ax.com>
Source record: 280

On Wed, 6 Feb 2013 22:08:02 +0000, Channel Jumper
<Channel.Jumper.b5898f8@radiobanter.com> wrote:

>
>'Tom[_8_ Wrote:
>> ;801430']Hi all
>>
>> Now I need a recommendation for a 2m 70cm base antenna. This will go
>> right
>> at the top of a 50ft tower. My ringo 2m modification antenna didn't pan
>> out
>> too well. I could get low SWR on some freq but I want a wider range of
>> work.
>> If that is possible. I also use it for 156 megs (Marine band).
>>
>> I am looking at the utubes of dual band antennas for home, I like the
>> UVS-300.
>>
>> Can anyone make a recommendation for the purchase of a dual band
>> antenna? I
>> would also like to use it as a SWL antenna as I listen a lot on all
>> bands.
>> This antenna will be verticle and right at the top of the tower. I am
>> hoping
>> to spend about 200 dollars.
>>
>> Thanks for any comments,
>
>The antenna of choice is the Diamond X 510 fed with Belden 9913 or LMR
>400
>
>Ringo's are nothing more then a over glorified dummy load..
>
>Second choice would be a Diamond V2000 if you also wanted to include 6
>meters.....
>
>On two meters FM - I have talked up to 1500 miles when the bands were
>open with the Diamond V2000 and frequently talk 50 / 75 miles in the
>mountains of western Pennsylvania - although my elevation helps a
>little.
>
>I am at 1400' amsl - 60 miles west of State College and 65 miles east of
>Pittsburgh and I can talk and listen - north, south, east and west
>about 50 miles full quieting.

Do not take the Diamond X510, take a shorter one.
The long antenna bends and swayes in the wind causing unnecessary
fading. The bending results in early failure.

You cannot SWL with a real duoband antenna, because it is frequency
selective and is dead on the SW bands.

w.

108. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-07 13:06:23 UTC
From: Channel Jumper <Channel.Jumper.b599618@radiobanter.com>
Message-ID: <Channel.Jumper.b599618@radiobanter.com>
Source record: 281

'Helmut Wabnig[_2_ Wrote:
> ;801459']On Wed, 6 Feb 2013 22:08:02 +0000, Channel Jumper
> Channel.Jumper.b5898f8@radiobanter.com wrote:
> -
>
> 'Tom[_8_ Wrote: -
> ;801430']Hi all
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> Now I need a recommendation for a 2m 70cm base antenna. This will go
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> Pittsburgh and I can talk and listen - north, south, east and west
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> fading. The bending results in early failure.
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> You cannot SWL with a real duoband antenna, because it is frequency
> selective and is dead on the SW bands.
>
> w.

Ya - I didn't catch that one.
Longer wavelengths requires a larger antenna, hence you aren't going to use a 2 meter antenna to listen to 80 or 160 meters - at least you probably aren't going to work much DX - but the bottom line is - you need more then one antenna to do everything...

MIght I suggest the Barker and Williamson BWD 90 folded dipole for the HF bands. Problem is - it costs more then 200 dollars.

The Diamond X510 should not give you much problems with bending - opposed to what Wabnig sez...

Technicially, you should never put a vertical antenna at the very top of any tower. You should side mount it - which would eliminate any bending or flexing. Putting it at the top of the tower - just turns it into a good lightning rod.

--
Channel Jumper

109. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-08 14:08:47 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <MF7Rs.70704$O02.69154@newsfe18.iad>
Source record: 282

Thanks for the tips

Are any better than the others in cross frequency rejection? I want a high gain antenna but nothing that would pull in too many high power operators locally.

Sometimes there are pagers or text message providers who bleed onto two meters, especially when a local ham transmits, seems to come in strong. Are there any ways to reduce or eliminate the cross frequency intermodulation? I like the idea of the 17 foot, no problem with height, height means gain, gain sometimes means intermodulation.

The diamond X-510 has very good reviews,

Any ideas how to eliminate cross channel intermodulation with good antenna? Or right antenna?

Thanks

"Channel Jumper" <Channel.Jumper.b599618@radiobanter.com> wrote in message news:Channel.Jumper.b599618@radiobanter.com...
>
> 'Helmut Wabnig[_2_ Wrote:
>> ;801459']On Wed, 6 Feb 2013 22:08:02 +0000, Channel Jumper
>> Channel.Jumper.b5898f8@radiobanter.com wrote:
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>> 'Tom[_8_ Wrote: -
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>> Pittsburgh and I can talk and listen - north, south, east and west
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>> Do not take the Diamond X510, take a shorter one.
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>>
>> You cannot SWL with a real duoband antenna, because it is frequency
>> selective and is dead on the SW bands.
>>
>> w.
>
> Ya - I didn't catch that one.
> Longer wavelengths requires a larger antenna, hence you aren't going to
> use a 2 meter antenna to listen to 80 or 160 meters - at least you
> probably aren't going to work much DX - but the bottom line is - you
> need more then one antenna to do everything...
>
> MIght I suggest the Barker and Williamson BWD 90 folded dipole for the
> HF bands. Problem is - it costs more then 200 dollars.
>
> The Diamond X510 should not give you much problems with bending -
> opposed to what Wabnig sez...
>
> Technicially, you should never put a vertical antenna at the very top of
> any tower. You should side mount it - which would eliminate any bending
> or flexing. Putting it at the top of the tower - just turns it into a
> good lightning rod.

>
>
>
>
> --
> Channel Jumper
>

110. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-08 14:24:09 UTC
From: Channel Jumper <Channel.Jumper.b5ae798@radiobanter.com>
Message-ID: <Channel.Jumper.b5ae798@radiobanter.com>
Source record: 283

Not to get too technicial, but the title of the post was Dual Band
Antenna ???
Not one antenna that does it all.

The only antenna that does more then one or three bands would be the
discone antenna...

The Diamond Discone will operate somewhere between 10 meters and 900
MHz.

Any other antenna would require the use of traps or solenoids to make
the antenna resonant for that band.

One other antenna - if you had the money and the real estate would be
the High Power - Off Center Fed Dipole - which operates practically
everywhere between 440 MHz and 160 meters - with the exception of 15 and
30 meters.

http://www.angelfire.com/electronic/hypower/

--
Channel Jumper

111. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-08 17:03:53 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <k2bah89f7u69sasr3ml2g2urhajnsg9v66@4ax.com>
Source record: 284

On Fri, 8 Feb 2013 09:08:47 -0500, "Tom" <abraa@cadabraa.ca> wrote:

>Are any better than the others in cross frequency rejection? I want a high
>gain antenna but nothing that would pull in too many high power operators
>locally.
>
>Sometimes there are pagers or text message providers who bleed onto two
>meters, especially when a local ham transmits, seems to come in strong. Are
>there any ways to reduce or eliminate the cross frequency intermodulation? I
>like the idea of the 17 foot, no problem with height, height means gain,
>gain sometimes means intermodulation.
>
>The diamond X-510 has very good reviews,
>
>Any ideas how to eliminate cross channel intermodulation with good antenna?
>Or right antenna?

You're antenna isn't going to do much for removing excessively strong
signals, such as paging. The single best improvement you can do is to
lose your scanner, and get a better receiver with a better 3rd order
intermod (IMD3) specification. By the nature of the beast, scanners
are highly susceptible to intermod mixes in their front ends.

There are cavity and crystal notch filters, that will reduce the
signal levels around the paging transmitter frequency, without
affecting the operating frequency (much). Search for crystal VHF
notch filter or cavity VHF notch filter.
<http://www.parelectronics.com/amateur.php>
<http://www.vk5zd.com/PagerFilter/Filter.aspx>
Careful what you buy as some notch filers are receive only and will
blow up if you transmit through it.

You can also build a tolerable notch filter with a T-connector and a
1/4 wave coax stub:
<http://dl4xav.sysve.de/coax.filter/coax-filter.html>

There are also ham radio bandpass filters, such as:
<http://www.dci.ca/?Section=Products&SubSection=Amateur-FAQ>
A BPF has the advantage of removing multiple sources of IMD, from a
wide variety of off frequency sources, while the various notch filters
only remove one frequency.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com

Skype: JeffLiebermann AE6KS 831-336-2558

112. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-08 18:57:03 UTC
From: dplatt@radagast.org
Message-ID: <vcufu9-qc6.ln1@radagast.org>
Source record: 285

In article <k2bah89f7u69sasr3ml2g2urhajnsg9v66@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

>>Any ideas how to eliminate cross channel intermodulation with good antenna?
>>Or right antenna?

>You're antenna isn't going to do much for removing excessively strong
>signals, such as paging. The single best improvement you can do is to
>lose your scanner, and get a better receiver with a better 3rd order
>intermod (IMD3) specification. By the nature of the beast, scanners
>are highly susceptible to intermod mixes in their front ends.

This is also a problem for many (most?) modern ham HTs, which have
broad-as-a-barn front ends. Their "DC to daylight" reception is both
a feature-advantage and a robustness-disadvantage. Older single-band
radios often have better front end filters.

>There are cavity and crystal notch filters, that will reduce the
>signal levels around the paging transmitter frequency, without
>affecting the operating frequency (much). Search for crystal VHF
>notch filter or cavity VHF notch filter.

><http://www.parelectronics.com/amateur.php>

I can offer a thumbs-up for the PAR Electronics VHFTN152-158. I had
terrible pager intermod problems with my Yaesu VX-5, whenever I had it
hooked to a "real" antenna (roof, bicycle-mobile flag J-pole, etc.)
rather than a rubber duck.

The pager-notch filter eliminated the problem, and as far as I can
tell it hasn't had a significant effect on ham-band receive
sensitivity or transmit power on either 2 meters or 440. I assume I'm
losing some signal and power due to insertion loss but it hasn't been
noticeable.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

113. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 02:26:03 UTC
From: tom <news4792@taring.org>
Message-ID: <Fo-dnVqoAq0kLojMnZ2dnUVZ_r2dnZ2d@iphouse.net>
Source record: 286

On 2/8/2013 8:24 AM, Channel Jumper wrote:

> One other antenna - if you had the money and the real estate would be
> the High Power - Off Center Fed Dipole - which operates practically
> everywhere between 440 MHz and 160 meters - with the exception of 15 and
> 30 meters.
>
> http://www.angelfire.com/electronic/hypower/

If you believe that an antenna will operate effectively from 160m to
70cm you are even more ignorant than I previously thought.

And OCFD are not good even at HF if you really understand how they work
and the problems they have because of that.

tom
K0TAR

114. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 02:55:27 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <jdebh856k6si2qhcslfinenuig6r5uh4s1@4ax.com>
Source record: 287

On Fri, 08 Feb 2013 20:26:03 -0600, tom <news4792@taring.org> wrote:

>If you believe that an antenna will operate effectively from 160m to
>70cm you are even more ignorant than I previously thought.

Yep. To paraphrase Roy Lewallen (W7EL):
Small size, broadband, gain.... pick any two.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

115. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 03:12:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <clebh8dbn1kg358gdra6np7h1iu5d5gksn@4ax.com>
Source record: 288

On Fri, 8 Feb 2013 10:57:03 -0800, dplatt@radagast.org (Dave Platt)
wrote:

>In article <k2bah89f7u69sasr3ml2g2urhajnsg9v66@4ax.com>,
>Jeff Liebermann <jeffl@cruzio.com> wrote:
>
>>>Any ideas how to eliminate cross channel intermodulation with good antenna?
>>>Or right antenna?
>
>>You're antenna isn't going to do much for removing excessively strong
>>signals, such as paging. The single best improvement you can do is to
>>lose your scanner, and get a better receiver with a better 3rd order
>>intermod (IMD3) specification. By the nature of the beast, scanners
>>are highly susceptible to intermod mixes in their front ends.
>
>This is also a problem for many (most?) modern ham HTs, which have
>broad-as-a-barn front ends. Their "DC to daylight" reception is both
>a feature-advantage and a robustness-disadvantage. Older single-band
>radios often have better front end filters.

Yep. Some receivers and scanner at least have tracking filters in the
front end. These have their own collection of problems, such as the
varactors going nonlinear when overloaded and creating a nifty mixer.
However, for most applications, they're much better than a barn door
front end.

>>There are cavity and crystal notch filters, that will reduce the
>>signal levels around the paging transmitter frequency, without
>>affecting the operating frequency (much). Search for crystal VHF
>>notch filter or cavity VHF notch filter.
>
>><http://www.parelectronics.com/amateur.php>
>
>I can offer a thumbs-up for the PAR Electronics VHFTN152-158. I had
>terrible pager intermod problems with my Yaesu VX-5, whenever I had it
>hooked to a "real" antenna (roof, bicycle-mobile flag J-pole, etc.)
>rather than a rubber duck.

I have a VX-5 and know what you mean. Totally useless receiver with
an outside antenna. Good to know that the PAR notch filters work. I
may have an application at a repeater site. I usually make my own
notch filters, but I'm tend to get lazy when I'm short on time.

>The pager-notch filter eliminated the problem, and as far as I can
>tell it hasn't had a significant effect on ham-band receive
>sensitivity or transmit power on either 2 meters or 440. I assume I'm

>losing some signal and power due to insertion loss but it hasn't been
>noticeable.

The Par site claims 0.5dB loss on both 144 and 440Mhz. That's about
5%, which is barely noticeable. No clue what's inside the Par
filters, but from the trimmer, my guess(tm) would be some helical
resonators.

I usually use single port cavities, which are generally useless for
anything except traps, instead of 1/4 wave stubs. I also have a few
adjustable coax sleeves, which work great, but tend to leak a bit.
Lots of ways to build a notch filter.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

116. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 03:50:06 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <nuCdnT77rP7zWojMnZ2dnUVZ_rGdnZ2d@earthlink.com>
Source record: 289

"tom" <news4792@taring.org> wrote in message
news:Fo-dnVqoAq0kLojMnZ2dnUVZ_r2dnZ2d@iphouse.net...
>
> And OCFD are not good even at HF if you really understand how they work
> and the problems they have because of that.
>
> tom
> K0TAR
>
>

Tom have you ever compaired the OCF to other antennas at your house ?

I have. I have up an 80 meter dipole and OCF at right angles to each other at about 50 to 60 feet on each end. There is not much differance in the two on 80 except in the favored directions.

Also is a 3 element tribander at 60 feet. On 20 and 10 meters there is not really that much differance on the stateside stations either when the stations are in the direction the OCF favors. There is a big differance in the directions that the OCF does not favor as it should be.
If I could only put up a dipole nonrotating antenna, that would still be the results.

Now granted the OCF will not work all that well above 10 meters, and there are some low bands such as 15 meters it will not work well as the swr is very high.

The OCF I am using is a home made Carolina Windom type for 80 meters and above.

de KU4PT

117. INDIAN HOT VIDEOS AND LIP KISS PHOTOS TO U TH 66

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 09:08:11 UTC
From: 866434 <iashjbbxdhvv@gmail.com>
Message-ID: <0d5fc3a1-5ca2-438b-9bbd-fcaccf1d3140@d9g2000pbx.googlegroups.com>
Source record: 290

indian hot
http://tbhivideos.blogspot.in/2013/02/indian-hot.html
tollywood hot
http://tbhivideos.blogspot.in/2013/02/tollywood-hot.html
bollywood hot
http://tbhivideos.blogspot.in/2013/02/bollywood-hot.html
tamil hot
http://tbhivideos.blogspot.in/2013/02/tamil-hot.html
south hot
http://tbhivideos.blogspot.in/2013/02/south-hot.html
mallu hot
http://tbhivideos.blogspot.in/2013/02/mallu-hot.html
indian real kiss
http://tbhivideos.blogspot.in/2013/02/indian-real-kiss.html
hollywood hot
http://tbhivideos.blogspot.in/2013/02/hollywood-hot.html
kannada hot
http://tbhivideos.blogspot.in/2013/02/kannada-hot.html

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dotnet questions 3
http://allinterviewsquestions.blogspot.in/2009/02/dotnet-questions-3.html

118. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 09:09:21 UTC
From: "Helmut Wabnig"
Message-ID: <ne4ch8ld81c7fok53tntlstrro4ehvdt94@4ax.com>
Source record: 291

On Fri, 8 Feb 2013 09:08:47 -0500, "Tom" <abraa@cadabraa.ca> wrote:

>Thanks for the tips

snip

>The diamond X-510 has very good reviews,
>
I cut mine to small pieces and dumped into the garbage bin.

That much for the good reviews.

But you don't want to listen and learn.

w.

119. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 14:51:37 UTC
From: Channel Jumper <Channel.Jumper.b5c3918@radiobanter.com>
Message-ID: <Channel.Jumper.b5c3918@radiobanter.com>
Source record: 292

tom;801521 Wrote:
> On 2/8/2013 8:24 AM, Channel Jumper wrote:
> -
> One other antenna - if you had the money and the real estate would be
> the High Power - Off Center Fed Dipole - which operates practically
> everywhere between 440 MHz and 160 meters - with the exception of 15
> and
> 30 meters.
>
> http://www.angelfire.com/electronic/hypower/-
>
> If you believe that an antenna will operate effectively from 160m to
> 70cm you are even more ignorant than I previously thought.
>
> And OCFD are not good even at HF if you really understand how they work
>
> and the problems they have because of that.
>
> tom
> K0TAR

I am going to explain it, but only once.
If you talk to the owner of that web site, he will tell you that the designer of the particular model of off center fed dipole that I am talking about is K3CC.
Again, if you call him on the phone, he will explain to you that K3CC holds 27 US patents and is a lot more intelligent then you will ever be.

Radio works on the principal of wavelengths - the off center fed dipole works on the principal of 1/3 - 2/3rds.
A balanced dipole antenna is 1/2 wave length on the frequency of design.

A off center fed dipole is not a balanced antenna, but exhibits some properities not found in a regular old dipole.

If it is resonant - 1/2 wavelength at 160 meters, then it is a full wavelength at 80 meters, is 2 wavelengths long at 40 meters, is 4 wavelengths long at 20 meters etc etc etc.....

Reguardless of it's length - you can always find someplace where it is resonant. Its SWR is flat as a board on most bands and is below 2:1 most everywhere else with the exception of 15 and 30 meters.....

The neatest thing I ever heard was from a old Motorola Technician who told me two important things.
First was that God gave us two ears and only one mouth.
That means we should listen twice as much as we should speak.

Second was that when a manufacturer makes a radio, they make the most important knob the largest knob - hence the tuning knob is the largest knob on the radio.
If you don't like what you hear - you turn the knob.

I was under the impression that this person was a HAM and wanted to talk as well as listen.
Then we got into a discussion about scanners.
Now I am confused.

With any type of communications - if a pager is suspect and it interferes with amateur radio, you can either A - turn the operator of the pager into the FCC for interfering with amateur radio communications - good luck, or you can add filtering.

Even some two meter repeaters operates illegally, because their signals splatter all over other peoples repeaters.. We need to remember that repeaters are not built and owned by the government or industry, but by regular old ham radio operators like you and me.

As far as analog scanners goes, you sure can't beat a Uniden 890XLT... Even unmodded, it should hold 200 channels, and has a very sensitive receive.

Moving up to a dedicated transceiver - that can be used as a all band scanner, you could purchase a Yaesu 8900 which does everything from 10 meters to 800 MHz.... At about $450 new, and with a slight modification - resistor removal, will transmit 28 - 29 Mhz, 50 - 54 MHz, 140 - 148 Mhz, 430 - 460 Mhz. and will listen everywhere else.

If you don't have a ham license, then just put the microphone away and listen.

--
Channel Jumper

120. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 17:12:07 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkhd0r7.eav.nomail@xs8.xs4all.nl>
Source record: 293

Channel Jumper <Channel.Jumper.b5c3918@radiobanter.com> wrote:
>
> tom;801521 Wrote:
>> On 2/8/2013 8:24 AM, Channel Jumper wrote:
>> -
>> One other antenna - if you had the money and the real estate would be
>> the High Power - Off Center Fed Dipole - which operates practically
>> everywhere between 440 MHz and 160 meters - with the exception of 15
>> and
>> 30 meters.
>>
>> http://www.angelfire.com/electronic/hypower/-
>>
>> If you believe that an antenna will operate effectively from 160m to
>> 70cm you are even more ignorant than I previously thought.
>>
>> And OCFD are not good even at HF if you really understand how they work
>>
>> and the problems they have because of that.
>>
>> tom
>> K0TAR
>
> I am going to explain it, but only once.
> If you talk to the owner of that web site, he will tell you that the
> designer of the particular model of off center fed dipole that I am
> talking about is K3CC.
> Again, if you call him on the phone, he will explain to you that K3CC
> holds 27 US patents and is a lot more intelligent then you will ever
> be.

I hope he is better at designing antennas than at building websites...
Sheesh, what a load of crap. It is still waiting after 5 minutes, and
when I click the "no popups" version I end up at some Google login.

121. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 17:35:17 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <Z8OdnXVzoN1IFYvMnZ2dnUVZ_h2dnZ2d@earthlink.com>
Source record: 294

"Rob" <nomail@example.com> wrote in message
news:slrnkhd0r7.eav.nomail@xs8.xs4all.nl...
>
> I hope he is better at designing antennas than at building websites...
> Sheesh, what a load of crap. It is still waiting after 5 minutes, and
> when I click the "no popups" version I end up at some Google login.

I thought it was just me, but looks like you are having the same problem I have with that site. I just gave up on trying to get anywhere with it.

I use an OCF lots of times for the low bands, but just do not see it being very good on 2 meters if designed to start at 160 or 80 meters.
Mine does not appear to be that good even at 6 meters. It might be IF I find a station in the right direction. My triband for 20,15,10 makes a beter antenna for 6 than the OCF. I do have 5 elements on 6 with an 18 foot boom to compair it with.

122. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 19:53:00 UTC
From: Me <me@shadow.orgs>
Message-ID: <me-03DD4C.10525209022013@news.starband.net>
Source record: 295

In article <Channel.Jumper.b5898f8@radiobanter.com>,
Channel Jumper <Channel.Jumper.b5898f8@radiobanter.com> wrote:

> Ringo's are nothing more then a over glorified dummy load..

I am sure Dr Reynolds of the University of Washington School of Electrical Engineering, who designed that antenna for AEA, would take considerable disagreement, with the above. This design was Extensively Tested on the UofW's Antenna Range, up on Pigeon Hill, West Seattle, Washington, which was donated to the UoW, after the Army was finished with the old Army Communications System site, post WWII.

Channel Jumper sure is a Morooon (Bugs Bunny Definition) and has no relevant Historical Knowledge.....

Me One who actually KNOEWS the relevant FACTS....

123. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 20:32:14 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <J_udnYDR1_7TL4vMnZ2dnUVZ_r2dnZ2d@earthlink.com>
Source record: 296

"Me" <me@shadow.orgs> wrote in message
news:me-03DD4C.10525209022013@news.starband.net...
> In article <Channel.Jumper.b5898f8@radiobanter.com>,
> Channel Jumper <Channel.Jumper.b5898f8@radiobanter.com> wrote:
>
>> Ringo's are nothing more then a over glorified dummy load..
>
> I am sure Dr Reynolds of the University of Washington School of
> Electrical Engineering, who designed that antenna for AEA, would
> take considerable disagreement, with the above. This design was
> Extensively Tested on the UofW's Antenna Range, up on Pigeon Hill, West
> Seattle, Washington, which was donated to the UoW, after the Army was
> finished with the old Army Communications System site, post WWII.
>
> Channel Jumper sure is a Morooon (Bugs Bunny Definition) and has no
> relevant Historical Knowledge.....
>
> Me One who actually KNOEWS the relevant FACTS....

Are you sure AEA had an antenna called Ringo ?

Cushcraft is the only major company I knew of that produced an antenna
called Ringo.

AEA did have several other antennas, the Isopole being one for 2 meters and
some other frequencies.

The origional Ringo for 2 meters was not a very good antenna for most. It
worked , but tended to shoot much of the signal off at high angles. Fine if
in a low area, not so good for the higher areas.
CC also produced some 11 element beams that were a very poor antenna for the
size. I compaired a couple of them with a home built quagi out of the ARRL
handbook and the 8 element quagi was much beter than the 11 element CC.

de KU4PT

124. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 21:37:26 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <1nedh81m7u6kdqahitgf1jk21nn0l4unpa@4ax.com>
Source record: 297

On Sat, 09 Feb 2013 10:53:00 -0900, Me <me@shadow.orgs> wrote:

>In article <Channel.Jumper.b5898f8@radiobanter.com>,
> Channel Jumper <Channel.Jumper.b5898f8@radiobanter.com> wrote:
>
>> Ringo's are nothing more then a over glorified dummy load..
>
>I am sure Dr Reynolds of the University of Washington School of
>Electrical Engineering, who designed that antenna for AEA, would
>take considerable disagreement, with the above. This design was
>Extensively Tested on the UofW's Antenna Range, up on Pigeon Hill, West
>Seattle, Washington, which was donated to the UoW, after the Army was
>finished with the old Army Communications System site, post WWII.

Not AEA, but for Cushcraft.

Obituary:
<http://community.seattletimes.nwsource.com/archive/?date=19920205&slug=1474034>
I don't believe Dr Reynolds designed the Ringo Ranger for Cushcraft
(Now MFJ). The MFJ catalog page claims the Ringo Ranger II was
designed by Lester A. Cushman, W1BX(sk)
<http://www.cushcraftamateur.com/Product.php?productid=AR-2>
Dr Reynolds did write an article "The 5/8-Wavelength Antenna Mystique"
for the ARRL Antenna Compendium, Volume 1 Pg 101-106, (that seems to
have disappeared from my shelf), which may have created some
confusion.

My take on the Ringo Ranger is that it's a tolerable design, but not
the way it's being built. I've seen far too many cracked SO-239 like
connectors, corroded adjustment screws and elements, crumbling
insulators, crushed mounting tubes, etc. It's major advantage is that
without a molded base transformer, this 5/8 wave or (0.64 wave)
antenna can be cheaply built, and that tunes a tolerable wide
frequency range. Were it built mechanically better, I'm sure it would
have had a better reputation. That lack of a commercial equivalent
also offers a clue as to its quality.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

125. test

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 23:24:03 UTC
From: Boomer <boomer@nowhwere.com>
Message-ID: <rdBRs.73063$H5.54950@newsfe28.iad>
Source record: 299

```
test
```

126. test

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 23:32:10 UTC
From: seediq <outsider@nowhwere.com>
Message-ID: <sdBRs.73064$H5.63381@newsfe28.iad>
Source record: 300

```
test
```

127. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 23:38:14 UTC
From: tom <news4792@taring.org>
Message-ID: <SLOdnaUBgv9-QIvMnZ2dnUVZ_oKdnZ2d@iphouse.net>
Source record: 298

On 2/8/2013 9:50 PM, Ralph Mowery wrote:
> "tom" <news4792@taring.org> wrote in message
> news:Fo-dnVqoAq0kLojMnZ2dnUVZ_r2dnZ2d@iphouse.net...
>>
>> And OCFD are not good even at HF if you really understand how they work
>> and the problems they have because of that.
>>
>> tom
>> K0TAR
>>
>>
>
> Tom have you ever compaired the OCF to other antennas at your house ?
>
> I have. I have up an 80 meter dipole and OCF at right angles to each other
> at about 50 to 60 feet on each end. There is not much differance in the two
> on 80 except in the favored directions.

Well, since a 3 element tribander would have less than an S unit over a
dipole or an OCF I would expect you're correct in stating you can see
almost no difference. They still have problems.

tom
K0TAR

128. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 23:46:59 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <QdGdnX-zSrNqQovMnZ2dnUVZ_sSdnZ2d@earthlink.com>
Source record: 351

"tom" <news4792@taring.org> wrote in message
news:SLOdnaUBgv9-QIvMnZ2dnUVZ_oKdnZ2d@iphouse.net...
> Well, since a 3 element tribander would have less than an S unit over a
> dipole or an OCF I would expect you're correct in stating you can see
> almost no difference. They still have problems.
>
> tom
> K0TAR
>

Again I ask, have you ever used an OCF ?

Also what problems do they have that other antennas do not have as long as
they are used on the bands they are designed for ?

129. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 23:56:06 UTC
From: tom <news4792@taring.org>
Message-ID: <T4ydnZ03eJaOf4vMnZ2dnUVZ_jydnZ2d@iphouse.net>
Source record: 352

On 2/9/2013 8:51 AM, Channel Jumper wrote:
>
> I am going to explain it, but only once.
> If you talk to the owner of that web site, he will tell you that the
> designer of the particular model of off center fed dipole that I am
> talking about is K3CC.
> Again, if you call him on the phone, he will explain to you that K3CC
> holds 27 US patents and is a lot more intelligent then you will ever
> be.
>

I wasn't talking about him, I was talking about you.

I'll say it again, if you think that antenna works well from 160 or 80m to 70cm, which is 420 to 450 MHz if you haven't figured that out, you are more ignorant than I thought.

And patents aren't always about smart. Nowadays almost never. They don't even have to be about reality.

They are about lawyers, paperwork, patience, money and lawyers.

tom
K0TAR

130. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-09 23:58:13 UTC
From: tom <news4792@taring.org>
Message-ID: <T4ydnZw3eJYPf4vMnZ2dnUVZ_jydnZ2d@iphouse.net>
Source record: 353

On 2/9/2013 5:46 PM, Ralph Mowery wrote:
> "tom" <news4792@taring.org> wrote in message
> news:SLOdnaUBgv9-QIvMnZ2dnUVZ_oKdnZ2d@iphouse.net...
>> Well, since a 3 element tribander would have less than an S unit over a
>> dipole or an OCF I would expect you're correct in stating you can see
>> almost no difference. They still have problems.
>>
>> tom
>> K0TAR
>>
>
> Again I ask, have you ever used an OCF ?
>
> Also what problems do they have that other antennas do not have as long as
> they are used on the bands they are designed for ?
>
>

Sure. Don't like them. They have problems that center feds don't.

tom
K0TAR

131. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-10 00:01:46 UTC
From: tom <news4792@taring.org>
Message-ID: <BcudnVUnetH6fovMnZ2dnUVZ_q2dnZ2d@iphouse.net>
Source record: 354

On 2/9/2013 5:46 PM, Ralph Mowery wrote:
> "tom" <news4792@taring.org> wrote in message
> news:SLOdnaUBgv9-QIvMnZ2dnUVZ_oKdnZ2d@iphouse.net...
>> Well, since a 3 element tribander would have less than an S unit over a
>> dipole or an OCF I would expect you're correct in stating you can see
>> almost no difference. They still have problems.
>>
>> tom
>> K0TAR
>>
>
> Again I ask, have you ever used an OCF ?
>
> Also what problems do they have that other antennas do not have as long as
> they are used on the bands they are designed for ?
>
>

Feedline radiation problems and odd impedances. They seldom live up to
the claims for band coverage. If you have to use a tuner anyway, why
add the unbalanced problems into the mix? Just use a balanced antenna.

tom
K0TAR

132. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-10 02:23:49 UTC
From: tom <news4792@taring.org>
Message-ID: <tK-dnUPlsZUvmYrMnZ2dnUVZ_uadnZ2d@iphouse.net>
Source record: 355

On 2/9/2013 8:51 AM, Channel Jumper wrote:
> tom;801521 Wrote:
>> On 2/8/2013 8:24 AM, Channel Jumper wrote:
>> -
>> One other antenna - if you had the money and the real estate would be
>> the High Power - Off Center Fed Dipole - which operates practically
>> everywhere between 440 MHz and 160 meters - with the exception of 15
>> and
>> 30 meters.
>>
>> http://www.angelfire.com/electronic/hypower/-
>>
>> If you believe that an antenna will operate effectively from 160m to
>> 70cm you are even more ignorant than I previously thought.
>>
>> And OCFD are not good even at HF if you really understand how they work
>>
>> and the problems they have because of that.
>>
>> tom
>> K0TAR
>
> I am going to explain it, but only once.

One other problem you may have missed. Any choking system you have that
works at 160m won't work at about 20m and up. So you you need at least
2 different chokes for 20m+. And probably a third to reach 70cm.

Concerning pattern, anything 10 meters and up becomes a bit crazy
because the wires are quite directional with gain in several different
directions.

And 70cm would be useless compared to a bad yagi with ok coax.

tom
K0TAR

133. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-10 08:02:51 UTC
From: nm5k@wt.net
Message-ID: <8af455c5-041b-4d14-8615-dc700fa12786@googlegroups.com>
Source record: 356

On Saturday, February 9, 2013 3:37:26 PM UTC-6, Jeff Liebermann wrote:

> Dr Reynolds did write an article "The 5/8-Wavelength Antenna Mystique"
>
> for the ARRL Antenna Compendium, Volume 1 Pg 101-106, (that seems to
>
> have disappeared from my shelf), which may have created some
>
> confusion.
>
>
>
> My take on the Ringo Ranger is that it's a tolerable design, but not
>
> the way it's being built.

I think they were OK for a simple and fairly cheap design, but
the Ringo Ranger 2 was a much better antenna than the regular
Ringo Ranger without the lower decoupling section.
I picked up a Ringo Ranger free years ago, and made my own radial
set which copied the commercial Ringo Ranger 2 design.

I tested it without the section, and with, and there was a huge
difference in the pattern. I'm talking in the multi S units range
with the local low angle signals I was testing with.
So there was obviously a large amount of skewing without the
decoupling section. With it, it was not a bad antenna at all,
and fairly low impact visually.

Reynolds was involved with AEA, and was behind the design of
the Isopoles, and other marine type whips they sold.
The Isopole was slightly superior to the Ringo Ranger 2, mainly
because it had superior decoupling with it's cones, vs the RR2
using a length of feedline, and a set of radials.
But to me, the Isopole was kind of ugly.. Like having a ballistic
missile on the house.. lol.. But it was the best of the dual
5/8 wave verticals when it came to performance.

134. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-10 13:34:20 UTC
From: Channel Jumper <Channel.Jumper.b5d8a98@radiobanter.com>
Message-ID: <Channel.Jumper.b5d8a98@radiobanter.com>
Source record: 358

tom;801584 Wrote:
> On 2/9/2013 8:51 AM, Channel Jumper wrote:-
> tom;801521 Wrote:-
> On 2/8/2013 8:24 AM, Channel Jumper wrote:
> -
> One other antenna - if you had the money and the real estate would be
> the High Power - Off Center Fed Dipole - which operates practically
> everywhere between 440 MHz and 160 meters - with the exception of 15
> and
> 30 meters.
>
> http://www.angelfire.com/electronic/hypower/-
>
> If you believe that an antenna will operate effectively from 160m to
> 70cm you are even more ignorant than I previously thought.
>
> And OCFD are not good even at HF if you really understand how they
> work
>
> and the problems they have because of that.
>
> tom
> K0TAR-
>
> I am going to explain it, but only once.-
>
> One other problem you may have missed. Any choking system you have that
>
> works at 160m won't work at about 20m and up. So you you need at least
>
> 2 different chokes for 20m+. And probably a third to reach 70cm.
>
> Concerning pattern, anything 10 meters and up becomes a bit crazy
> because the wires are quite directional with gain in several different
> directions.
>
> And 70cm would be useless compared to a bad yagi with ok coax.
>
> tom
> K0TAR

Your problem is - you want to use a choke with a off center fed
antenna.
Either to reduce the RF going into the shack or to reduce noise.

If you really want to work DX, you don't want to use a choke.
It would be better to use a BALUN / transformer before the coax enters the shack then to use a choke.

As a comparison, I worked Field Days this year with K3CC's design antenna, @ 30' off the ground.
The group I worked with, had never met me in person before.
They had a dedicated group of people to operate and I was the odd man out.
I basically walked into the Field Days site 2 hours before start time, put up my antenna, connected my antenna and waited for Field Days to begin.

At 2 PM EST, I sat down and operated until 6 PM when they broke for supper.
At 7:30 PM - after supper, I found another spot to operate and hovered between 20 and 40 meters.

At 9 PM a club member showed up with a G5RV and demanded that I give him 20 meters.
At the same time, one of the club members was working digital modes with a Tarheel jr - about 60' away - and was not particular where he operated.
I experienced severe overload.

By 9 PM I already had 400 contacts.

The only reason why I had 400 contacts was because a club member asked me to try to operate on 15 meters for a hour to let other people operate on the other bands and I only made 2 contacts on 15.

11 - 1 AM I probably made another 100 contacts, at that point, it was getting harder and harder to find people that I had not already worked.

6 AM the next morning, I turned on the transceiver and started operating and by 8 AM I had a pileup going and was working 3 stations a minute, doing my own logging by hand and talking on a desk mic.
At 10 AM - the group decided that the bands were too noisy or that they couldn't find a quiet place to talk or they were all wore out from operating and so they decided to shut down, tear down and go home.

By that point I already had close to 700 contacts in the log.
Had they left me operate until closing time - which I could have operated the entire 27 hours, I could have easily went over 1500 contacts myself.

The guy working the digital modes only had about 90 contacts and he dumped his log and didn't even turn it in to the club.
Several other club members only had less then 100 contacts in their log.
It was a 5 station operation.

Reguardless of if they were using a beam antenna - 15 was operated on a home brew beam, or with dipole antenna's, or mobile antenna's - I still heard more then everyone else and I still did 7 times as many contacts.

To work them, you first have to hear them.

In the end, the person responsible for the clubs logs, didn't turn in the logs due to the fact that he was not computer literate, did not know how to use QRZ to confirm the call signs - so he could have matched the call signs to the operator or the location.
He turned in the paper logs - as 650 contacts for the entire group, and we were 3rd for the whole USA for that catagory. 5A I believe.
Commercial mains - I believe, because the guy working digital modes refused to let me hook up to his generator and I did not bring my own...

Had I not brought my 16' trailer, 100' of tower - for anyone to use, 200' of coax at all different lengths, spare power supplies and equipment, a 36' aluminum ladder and traveled 75 miles one way to participate, I could have brought my generator and we could have been in the top 50 in the USA for a 5 station effort on emergency power. And that would have only been because of my effort and my antenna and not because of anyone else in the group.

If you really want to compare antenna's, and if you operate somewhere beyond checking into nets and giving your no traffic, you need to find yourself a place like niles hill road, Coudersport PA - where the elevation is 2400' AMSL and very quiet.
The reason why most of you cannot understand good antenna design is because your experiences are limited to what you know, which is usually a city dweller that is in a bad location, that has to put up with power line noise, a lack of elevation and a lot too small for much of anything beyond a G5RV.

If you really want to contest - you need to check with the Frankford Radio Club - maybe they can tell you who set up their antenna's and who their best operators were...
Some BOZO in some backwater town that knows little to nothing giving advice about antenna's, that didn't even know that Cushcraft made a Ringo, attacking someone else's reputation - just because they don't like they guy, is not relevant. Usually the more educated people can see right through the Facade..

--
Channel Jumper

135. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-10 15:14:32 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <IYCdnagjttiaJ4rMnZ2dnUVZ_gmdnZ2d@earthlink.com>
Source record: 357

<nm5k@wt.net> wrote in message
news:8af455c5-041b-4d14-8615-dc700fa12786@googlegroups.com...

>> My take on the Ringo Ranger is that it's a tolerable design, but not
>>
>> the way it's being built.
>
> I think they were OK for a simple and fairly cheap design, but
> the Ringo Ranger 2 was a much better antenna than the regular
> Ringo Ranger without the lower decoupling section.
> I picked up a Ringo Ranger free years ago, and made my own radial
> set which copied the commercial Ringo Ranger 2 design.
>
> I tested it without the section, and with, and there was a huge
> difference in the pattern. I'm talking in the multi S units range
> with the local low angle signals I was testing with.
> So there was obviously a large amount of skewing without the
> decoupling section. With it, it was not a bad antenna at all,
> and fairly low impact visually.
>

When the lower radials were added the Ringo was suspose to work much beter.
By that time, the Ringo had fallen out of favor around here so I do not know
how well they worked. Main thing is that adding the radials defeated the
purpose of the antenna, which was to eliminate the radials.

136. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-10 17:47:11 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rglfh8h266l9nf01ilitaai12u8uf16qvf@4ax.com>
Source record: 359

On Sun, 10 Feb 2013 00:02:51 -0800 (PST), nm5k@wt.net wrote:

>On Saturday, February 9, 2013 3:37:26 PM UTC-6, Jeff Liebermann wrote:
>
>> Dr Reynolds did write an article "The 5/8-Wavelength Antenna Mystique"
>> for the ARRL Antenna Compendium, Volume 1 Pg 101-106, (that seems to
>> have disappeared from my shelf), which may have created some
>> confusion.
>>
>> My take on the Ringo Ranger is that it's a tolerable design, but not
>> the way it's being built.

>I think they were OK for a simple and fairly cheap design, but
>the Ringo Ranger 2 was a much better antenna than the regular
>Ringo Ranger without the lower decoupling section.
>I picked up a Ringo Ranger free years ago, and made my own radial
>set which copied the commercial Ringo Ranger 2 design.
>
>I tested it without the section, and with, and there was a huge
>difference in the pattern. I'm talking in the multi S units range
>with the local low angle signals I was testing with.
>So there was obviously a large amount of skewing without the
>decoupling section. With it, it was not a bad antenna at all,
>and fairly low impact visually.

Did you perhaps mount the antenna over a metal roof or on a tower side
arm? Without the decoupling section, the ground under the antenna
will cause pattern uptilt.

>Reynolds was involved with AEA, and was behind the design of
>the Isopoles, and other marine type whips they sold.
>The Isopole was slightly superior to the Ringo Ranger 2, mainly
>because it had superior decoupling with it's cones, vs the RR2
>using a length of feedline, and a set of radials.
>But to me, the Isopole was kind of ugly.. Like having a ballistic
>missile on the house.. lol.. But it was the best of the dual
>5/8 wave verticals when it came to performance.

Thanks. That explains a few things. Incidentally, my rule "The
uglier the antenna, the better it works" was originally based on the
isopole antenna.

I had the displeasure of going through a variety of antennas on our
radio club VHF repeater (K6BJ) about 10 years ago. We started with a
Cushcraft something (forgot the model number). After pouring water
out of the insides, I decided to replace it. The first attempt was a

Cushcraft AR2 Ring Ranger that was previously used as a backup antenna. It exhibited all the mechanical problems I previously itemized. The corrosion also generated intermod. After several other failed antenna tests, I settled on an a Diamond F22a, which has been in service since about 1997 without any problems. A second F22a was installed at our other repeater (KI6EH) with similar good results. The F22a is stainless and fiberglass, as opposed to the Ringo aluminum and galvanized steel. For UHF, we installed a Diamond X-50.
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/slides/Antennas.html>

I recently inherited a very used VHF isopole antenna, which I haven't tried yet. It's going to need extensive cleaning before installation. I agree that the cones do look rather strange. There are commercial antennas, with a similar design that use cylindrical tubing as decoupling sleeves, which are functionally identical and far less strange looking.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

137. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-11 01:55:35 UTC
From: tom <news4792@taring.org>
Message-ID: <QJ-dnXKpnqIK0oXMnZ2dnUVZ_gqdnZ2d@iphouse.net>
Source record: 360

On 2/10/2013 7:34 AM, Channel Jumper wrote:

<snip loads of braggadocio unrelated to what I said.>

You still haven't addressed your claim about 70cm.

tom
K0TAR

138. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-11 14:15:33 UTC
From: Channel Jumper <Channel.Jumper.b5edc18@radiobanter.com>
Message-ID: <Channel.Jumper.b5edc18@radiobanter.com>
Source record: 361

'Jeff Liebermann[_2_ Wrote:
> ;801600']On Sun, 10 Feb 2013 00:02:51 -0800 (PST), nm5k@wt.net wrote:
> -
> On Saturday, February 9, 2013 3:37:26 PM UTC-6, Jeff Liebermann wrote:
> -
> Dr Reynolds did write an article "The 5/8-Wavelength Antenna Mystique"
> for the ARRL Antenna Compendium, Volume 1 Pg 101-106, (that seems to
> have disappeared from my shelf), which may have created some
> confusion.
>
> My take on the Ringo Ranger is that it's a tolerable design, but not
> the way it's being built. --
> -
> I think they were OK for a simple and fairly cheap design, but
> the Ringo Ranger 2 was a much better antenna than the regular
> Ringo Ranger without the lower decoupling section.
> I picked up a Ringo Ranger free years ago, and made my own radial
> set which copied the commercial Ringo Ranger 2 design.
>
> I tested it without the section, and with, and there was a huge
> difference in the pattern. I'm talking in the multi S units range
> with the local low angle signals I was testing with.
> So there was obviously a large amount of skewing without the
> decoupling section. With it, it was not a bad antenna at all,
> and fairly low impact visually.-
>
> Did you perhaps mount the antenna over a metal roof or on a tower side
> arm? Without the decoupling section, the ground under the antenna
> will cause pattern uptilt.
> -
> Reynolds was involved with AEA, and was behind the design of
> the Isopoles, and other marine type whips they sold.
> The Isopole was slightly superior to the Ringo Ranger 2, mainly
> because it had superior decoupling with it's cones, vs the RR2
> using a length of feedline, and a set of radials.
> But to me, the Isopole was kind of ugly.. Like having a ballistic
> missile on the house.. lol.. But it was the best of the dual
> 5/8 wave verticals when it came to performance.-
>
> Thanks. That explains a few things. Incidentally, my rule "The
> uglier the antenna, the better it works" was originally based on the
> isopole antenna.
>
> I had the displeasure of going through a variety of antennas on our

> radio club VHF repeater (K6BJ) about 10 years ago. We started with a
> Cushcraft something (forgot the model number). After pouring water
> out of the insides, I decided to replace it. The first attempt was a
> Cushcraft AR2 Ring Ranger that was previously used as a backup
> antenna. It exhibited all the mechanical problems I previously
> itemized. The corrosion also generated intermod. After several other
> failed antenna tests, I settled on an a Diamond F22a, which has been
> in service since about 1997 without any problems. A second F22a was
> installed at our other repeater (KI6EH) with similar good results. The
> F22a is stainless and fiberglass, as opposed to the Ringo aluminum and
> galvanized steel. For UHF, we installed a Diamond X-50.
> http://tinyurl.com/bdbqaso
>
> I recently inherited a very used VHF isopole antenna, which I haven't
> tried yet. It's going to need extensive cleaning before installation.
> I agree that the cones do look rather strange. There are commercial
> antennas, with a similar design that use cylindrical tubing as
> decoupling sleeves, which are functionally identical and far less
> strange looking.
>
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

If you are building a repeater - you use a Station Master - commercial
grade antenna, not a cheap vertical like the Diamond X 50.
http://www.wadsworthsales.com/Pages/celwave.aspx

--
Channel Jumper

139. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-11 18:59:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ckeih8pmv0oqni6htoji4j9ftgi69404rs@4ax.com>
Source record: 362

On Mon, 11 Feb 2013 14:15:33 +0000, Channel Jumper
<Channel.Jumper.b5edc18@radiobanter.com> wrote:

>If you are building a repeater - you use a Station Master - commercial
>grade antenna, not a cheap vertical like the Diamond X 50.
>http://www.wadsworthsales.com/Pages/celwave.aspx

Thanks for the sage advice. There were problems with the installation
which prevented the use of heavy antennas with a high wind load. We
were offered a free 20 year old super station monster antenna but
turned it down due to the size (22ft). The Diamond F22a on the VHF
repeater has been quite adequate. While I'm sure the station monster
antenna would work well for those in the distance, we are more
interested in local communications. VHF and UHF coverage:
<http://802.11junk.com/jeffl/coverage/k6bj/146mhz/k6bj-146-3d.jpg>
<http://802.11junk.com/jeffl/coverage/k6bj/440mhz/k6bj-440-3d.jpg>

If you look at the photo of the (former) antenna tower[1],
<http://www.LearnByDestroying.com/k6bj/K6BJ%20Repeater/slides/Antennas.html>
you'll notice that the Diamond X50 was located so that it would not be
inside the antenna pattern of the upper Diamond F22a. The VHF antenna
was also limited in height by the proximity of the county and Verizon
radio vault and tower. This arrangement limited the length of the UHF
antenna to approximately that of an X50. I could have used a longer
UHF antenna, but I wanted altitude to clear some obstructions, rather
than gain. Since the UHF antenna was side mounted, the grounded arm
under the antenna tends to create some uptilt in the antenna pattern.
With a fairly low gain antenna, such as the X50, the effect is
minimal. Were it a higher gain antenna, which would have a narrower
beamwidth, the effect would be sufficient to dramatically reduce
signal strengths below the horizon. I've had to deal with this on
mountain tops quite often, and have sometimes resorted to mounting the
antenna upside-down in order to take advantage of the effect.

For the curious, the black yagi is the 420MHz link to KI6EH. The
coaxial antenna is a spare antenna for plugging in test equipment and
HT's when working on the machines.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

140. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-12 00:22:05 UTC
From: "Barry V." <not@spam.com>
Message-ID: <kl2jh8diql2nn56r39bak4ksvjpk75oetk@4ax.com>
Source record: 363

On Sat, 9 Feb 2013 14:51:37 +0000, Channel Jumper
<Channel.Jumper.b5c3918@radiobanter.com> wrote:

>I was under the impression that this person was a HAM and wanted to talk
>as well as listen.
>Then we got into a discussion about scanners.
>Now I am confused.

It may help to understand this is TUUK we are talking about. At least this time
it isn't about saunas.

141. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-12 02:47:55 UTC
From: tom <news4792@taring.org>
Message-ID: <qfidnZws5_XHMITMnZ2dnUVZ_q6dnZ2d@iphouse.net>
Source record: 364

On 2/10/2013 7:34 AM, Channel Jumper wrote:
> tom;801584 Wrote:
<snip>

>
> Your problem is - you want to use a choke with a off center fed
> antenna.
> Either to reduce the RF going into the shack or to reduce noise.
> If you really want to work DX, you don't want to use a choke.
> It would be better to use a BALUN / transformer before the coax enters
> the shack then to use a choke.
>

Please explain the difference between a choke and a balun in this situation.

tom
K0TAR

142. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-12 13:36:32 UTC
From: Channel Jumper <Channel.Jumper.b602d98@radiobanter.com>
Message-ID: <Channel.Jumper.b602d98@radiobanter.com>
Source record: 365

tom;801652 Wrote:
> On 2/10/2013 7:34 AM, Channel Jumper wrote:-
> tom;801584 Wrote:-
> snip
> -
>
> Your problem is - you want to use a choke with a off center fed
> antenna.
> Either to reduce the RF going into the shack or to reduce noise.
> If you really want to work DX, you don't want to use a choke.
> It would be better to use a BALUN / transformer before the coax enters
> the shack then to use a choke.
> -
>
> Please explain the difference between a choke and a balun in this
> situation.
>
> tom
> K0TAR

A balun is an electrical device that converts between a balanced signal (two signals working against each other where ground is irrelevant) and an unbalanced signal (a single signal working against ground or pseudo-ground). A balun can take many forms and may include devices that also transform impedances but need not do so. Transformer baluns can also be used to connect lines of differing impedance. The origin of the word balun is balance + unbalance.

Generally a balun consists of two wires (primary and secondary) and a toroid core: it converts the electrical energy of the primary wire into a magnetic field. Depending on how the secondary wire is done the magnetic field is converted back to a electric field.

A Choke - is simply a piece of coax or wire which is wound at the mininum bend radius of the coax. Several turns of coax makes a simple choke.
You have to be very careful not to open up the shield by winding it too tightly.

Baluns can take many forms and their presence is not always obvious. Sometimes, in the case of transformer baluns, they use magnetic coupling but need not do so. COMMON MODE CHOKES ARE ALSO USED AS BALUNS! and work by eliminating, rather than ignoring, common mode signals.

The key word there is - used as baluns.
If it was a Balun - they would call it a Balun

Coax works on the principal of a Faraday Cage.

Maybe you would like to explain for the people on this forum what a Faraday Cage is?

--
Channel Jumper

143. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-12 19:08:15 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ok4lh81d14dc28sh6q2o8qo2keu5rpcrv1@4ax.com>
Source record: 366

On Tue, 12 Feb 2013 13:36:32 +0000, Channel Jumper
<Channel.Jumper.b602d98@radiobanter.com> wrote:

>A balun is an electrical device that converts between a balanced signal
>(two signals working against each other where ground is irrelevant) and
>an unbalanced signal (a single signal working against ground or
(...)

<http://en.wikipedia.org/wiki/Balun>
Please provide a citation when plagerizing.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

144. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-13 00:51:53 UTC
From: tom <news4792@taring.org>
Message-ID: <5OWdnfaFoOg6fofMnZ2dnUVZ_o6dnZ2d@iphouse.net>
Source record: 367

On 2/12/2013 1:08 PM, Jeff Liebermann wrote:
> On Tue, 12 Feb 2013 13:36:32 +0000, Channel Jumper
> <Channel.Jumper.b602d98@radiobanter.com> wrote:
>
>> A balun is an electrical device that converts between a balanced signal
>> (two signals working against each other where ground is irrelevant) and
>> an unbalanced signal (a single signal working against ground or
> (...)
>
> <http://en.wikipedia.org/wiki/Balun>
> Please provide a citation when plagerizing.
>
>

He also didn't answer the question I asked, which would have been a much
much shorter answer.

tom
K0TAR

145. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-13 04:15:25 UTC
From: nm5k@wt.net
Message-ID: <2308fd12-95bc-4870-91c7-2151e0006266@googlegroups.com>
Source record: 368

On Sunday, February 10, 2013 9:14:32 AM UTC-6, Ralph Mowery wrote:

> When the lower radials were added the Ringo was suspose to work much beter.
>
> By that time, the Ringo had fallen out of favor around here so I do not know
>
> how well they worked. Main thing is that adding the radials defeated the
>
> purpose of the antenna, which was to eliminate the radials.

Well maybe as far as the standard Ringo, which is a half wave.
But the Ringo Ranger was a dual 5/8 collinear. Seems to me that
design was used more to get more gain vs the shorter antennas,
rather than trying to avoid radials.

When it first came out, decoupling from the feed line was not
given too much consideration, at least for lower cost amateur
antennas.. And most that used it, thought it did OK. Likely
because they had nothing better to compare to, or the feed line
lengths, mounting, did not skew that pattern as bad in some
cases, as it did others. The amount of skewing will vary some
in each installation. It was pretty bad in my case. :(

But then the Isopole came out.. And the roof caved in. lol..
The Isopole was so much better performing than the regular
Ringo Ranger, that Cushcraft had no choice but to add some
method of decoupling to their antenna, if they wanted to
continue to sell many of them.
So they added the lower 50 inches of coax, and a set of
1/4 wave radials at the bottom of that length of coax, which
was grounded at that point, to the mast supporting the antenna.

The decoupling section helped greatly, and saved Cushcraft
from certain VHF vertical sales ruination.
It was still slightly inferior to the method the Isopole
used, but close enough to keep them in the game.
Many preferred the RR2 because it was a bit less ugly than
the Isopole. And maybe a bit cheaper, but I can't remember
how they were priced at the time.

The only band I ever used a 1/2 wave Ringo, was on 10m.
And I ended up adding a Cushcraft type decoupling section
to it. It worked very well. But the 5/8 antennas I used
were better still.. But I didn't use 1/4 wave radials like
most do with 5/8 ground planes. At that time, I used 3/4
wave radials, and the antenna doubled as an appx 1/4 GP

on 30m.

146. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-13 04:26:11 UTC
From: nm5k@wt.net
Message-ID: <4de2fcff-f3d5-4be5-b639-c299642ae32f@googlegroups.com>
Source record: 369

On Sunday, February 10, 2013 11:47:11 AM UTC-6, Jeff Liebermann wrote:

> Did you perhaps mount the antenna over a metal roof or on a tower side
>
> arm? Without the decoupling section, the ground under the antenna
>
> will cause pattern uptilt.

Nope.. It was a mounted on a metal mast that was on my
non conducting roof. Probably about 30 feet off the ground or so.
I think most of the skewing in my case was due to feed line
radiation, more than effects from the ground.

>
>

> Thanks. That explains a few things. Incidentally, my rule "The
>
> uglier the antenna, the better it works" was originally based on the
>
> isopole antenna.

They were kinda ugly, but they sure worked well.
And some other companies have used that type of decoupling,
but most were more like cylinders, instead of funnel like cones.
Those were fairly common on some of the commercial verticals
used for public service, etc..
Also, most of those were 1/2 waves. IE: 1/4 wave upper radiator,
1/4 wave lower cylinder to complete the antenna, and then a lower
1/4 wave cylinder below that one for decoupling.
I think "Dodge" was one company that made those if I remember right.
The upper part of each cylinder was closed, and the bottom open.

147. 4181 Solution manuals to Mechanics, Mechanical Engineering and Aerospace Engineering Books

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-13 10:28:17 UTC
From: rodwes15@gmail.com
Message-ID: <cf8f3953-400c-44c2-a606-24cb2d7e2a8d@googlegroups.com>
Source record: 370

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Date: 2013-02-13 10:39:00 UTC
From: rodwes15@gmail.com
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158. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-14 03:50:59 UTC
From: tom <news4792@taring.org>
Message-ID: <SJqdnYVneeC8woHMnZ2dnUVZ_hednZ2d@iphouse.net>
Source record: 381

On 2/12/2013 10:15 PM, nm5k@wt.net wrote:

> Well maybe as far as the standard Ringo, which is a half wave.
> But the Ringo Ranger was a dual 5/8 collinear. Seems to me that
> design was used more to get more gain vs the shorter antennas,
> rather than trying to avoid radials.
>
> When it first came out, decoupling from the feed line was not
> given too much consideration, at least for lower cost amateur
> antennas.. And most that used it, thought it did OK. Likely
> because they had nothing better to compare to, or the feed line
> lengths, mounting, did not skew that pattern as bad in some
> cases, as it did others. The amount of skewing will vary some
> in each installation. It was pretty bad in my case. :(
>
> But then the Isopole came out.. And the roof caved in. lol..
> The Isopole was so much better performing than the regular
> Ringo Ranger, that Cushcraft had no choice but to add some
> method of decoupling to their antenna, if they wanted to
> continue to sell many of them.
> So they added the lower 50 inches of coax, and a set of
> 1/4 wave radials at the bottom of that length of coax, which
> was grounded at that point, to the mast supporting the antenna.
>
> The decoupling section helped greatly, and saved Cushcraft
> from certain VHF vertical sales ruination.
> It was still slightly inferior to the method the Isopole
> used, but close enough to keep them in the game.
> Many preferred the RR2 because it was a bit less ugly than
> the Isopole. And maybe a bit cheaper, but I can't remember
> how they were priced at the time.

I have a Cushcraft engineering connection from that era. I will seen
what I can learn.

tom
K0TAR

159. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-14 23:37:42 UTC
From: Channel Jumper <Channel.Jumper.b637959@radiobanter.com>
Message-ID: <Channel.Jumper.b637959@radiobanter.com>
Source record: 382

tom;801718 Wrote:
> On 2/12/2013 10:15 PM, nm5k@wt.net wrote:
> -
> Well maybe as far as the standard Ringo, which is a half wave.
> But the Ringo Ranger was a dual 5/8 collinear. Seems to me that
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> rather than trying to avoid radials.
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> When it first came out, decoupling from the feed line was not
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> The decoupling section helped greatly, and saved Cushcraft
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> It was still slightly inferior to the method the Isopole
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> how they were priced at the time.-
>
> I have a Cushcraft engineering connection from that era. I will seen
> what I can learn.
>
> tom
> K0TAR

Thanks for the information TOM

--
Channel Jumper

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opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

161. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-15 12:07:50 UTC
From: David <no@spam.please>
Message-ID: <kfl8em$4oc$1@dont-email.me>
Source record: 384

At Mon, 11 Feb 2013 19:22:05 -0500, Barry V. rearranged some electrons to write:

> On Sat, 9 Feb 2013 14:51:37 +0000, Channel Jumper
> <Channel.Jumper.b5c3918@radiobanter.com> wrote:
>
>>I was under the impression that this person was a HAM and wanted to talk
>>as well as listen.
>>Then we got into a discussion about scanners.
>>Now I am confused.
>
> It may help to understand this is TUUK we are talking about. At least
> this time it isn't about saunas.

Or magic lava rocks.

162. March 2013 QST Digital Edition - Special Antenna Issue

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-15 19:04:50 UTC
From: ARRL Web site <memberlist@www.arrl.org>
Message-ID: <20130215141249.B64C425410@bmail.arrl.org>
Source record: 385
Cross-posted to: rec.radio.amateur.moderated,rec.radio.amateur.antenna,rec.radio.info

March 2013 /QST/ Digital Edition - Now Available
<http://www.nxtbook.com/nxtbooks/arrl/qst_201302/>
**
<http://www.nxtbook.com/nxtbooks/arrl/qst_201302/>
Go to this link and start reading: March 2013 /QST/
<http://www.nxtbook.com/nxtbooks/arrl/qst_201303/>.

* It's Our Annual Antenna Issue!*

* Cover the entire 80 meter band with one dipole.
* Build two easy antennas for 1200 MHz.
* Try a different tilt-over mast.
* Add 6 meters to the Hy-Gain LJ-103BA Yagi.
* ...and much more!

* Enjoy Content You Won't Find in the Print Edition...*

* A video overview of the Tokyo Hy-Power HL-550FX linear amplifier
* Video walkthroughs of the MFJ-976 and Palstar BT-1500A balanced
antenna tuners

Every issue of /QST /is filled with the news and features you need to
keep active in Amateur Radio. Enjoy this issue!

December 2012 QST - Digital Edition
<http://www.nxtbook.com/nxtbooks/arrl/qst_201303/>

Apple App Store <https://itunes.apple.com/us/app/qst/id531766442?mt=8>
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Android devices should use the enhanced web version
<http://www.nxtbook.com/nxtbooks/arrl/qst_201303/> of /QST/ which is
optimized to automatically recognize Android phones, tablets and e-book
readers.

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To login or register, go to www.arrl.org/myarrl <http://www.arrl.org/myarrl>.
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163. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-16 01:50:00 UTC
From: tom <news4792@taring.org>
Message-ID: <C8adnaMqEI1ZeIPMnZ2dnUVZ_gidnZ2d@iphouse.net>
Source record: 386

On 2/13/2013 9:50 PM, tom wrote:
> On 2/12/2013 10:15 PM, nm5k@wt.net wrote:
>
> I have a Cushcraft engineering connection from that era. I will see
> what I can learn.
>
> tom
> K0TAR

Well I called this evening and he's contesting all weekend. I'll call him back Monday. It's very likely he was around when it was designed. Some may know who he was - "Joe" should be identification enough for those who are familiar the Cushcraft designers.

tom
K0TAR

164. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-16 07:16:19 UTC
From: Sal <salmonella@food>
Message-ID: <kfnbml$nm7$1@dont-email.me>
Source record: 387

"Helmut Wabnig" <hwabnig@.- --- -.dotat> wrote in message
news:d6o6h8lmfqbvton5lctkikrt7cdqq9baup@4ax.com...
> On Wed, 6 Feb 2013 22:08:02 +0000, Channel Jumper
> <Channel.Jumper.b5898f8@radiobanter.com> wrote:
>
>>
>>'Tom[_8_ Wrote:
>>> ;801430']Hi all
>>>
>>> Now I need a recommendation for a 2m 70cm base antenna. This will go
>>> right
>>> at the top of a 50ft tower. My ringo 2m modification antenna didn't pan
>>> out
>>> too well. I could get low SWR on some freq but I want a wider range of
>>> work.
>>> If that is possible. I also use it for 156 megs (Marine band).
>>>
>>> I am looking at the utubes of dual band antennas for home, I like the
>>> UVS-300.
>>>
>>> Can anyone make a recommendation for the purchase of a dual band
>>> antenna? I
>>> would also like to use it as a SWL antenna as I listen a lot on all
>>> bands.

// snip //

> You cannot SWL with a real duoband antenna, because it is frequency
> selective and is dead on the SW bands.
>
> w.

The shield on his dual-bander coax may work. The downside is the likely
pickup of interference close to the SW rcvr, like from a computer, switching
PS, fluorescent lights, etc.

I just tried it, using a coax-to-banana-jack adapter. I used a clip-lead to
connect the red banana jack to the shield of my 6m j-pole, making the shield
the antenna. It's about thirty feet long and it worked tolerably well on
the SW bands that are active at the moment. I did some A/B comparisons by
switching between the "shield-antenna" and my 20m dipole. Some SW stations
were actually better on the "shield-antenna."

"Sal"
(KD6VKW)

165. Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-16 07:31:52 UTC
From: Sal <salmonella@food>
Message-ID: <kfncjo$rj6$1@dont-email.me>
Source record: 388

I'm building a yagi from the measurement tables the ARRL Antenna Book. I have the driven element finished and getting a good SWRs with a home-made gamma match.

I'm going to mount it on a wood 2 X 2 with as many directors as will fit on an 8 feet boom.

Any advice? (I've already read that a gamma match is a poor choice but it did work, so we can skip that one. :-)

"Sal"
(KD6VKW)

166. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-16 13:54:15 UTC
From: Channel Jumper <Channel.Jumper.b657399@radiobanter.com>
Message-ID: <Channel.Jumper.b657399@radiobanter.com>
Source record: 389

'Sal[_4_ Wrote:
> ;801800']I'm building a yagi from the measurement tables the ARRL
> Antenna Book. I
> have the driven element finished and getting a good SWRs with a
> home-made
> gamma match.
>
> I'm going to mount it on a wood 2 X 2 with as many directors as will fit
> on
> an 8 feet boom.
>
> Any advice? (I've already read that a gamma match is a poor choice but
> it
> did work, so we can skip that one. :-)
>
> "Sal"
> (KD6VKW)

If you delve deeper, you will read that each time you add directors -
you have to recalculate the spacing between each director.
The length of each director and the spacing is very important.
Wood is a poor choice for anything more then a experiment - it is heavy,
and not very strong.

If you are serious about building that antenna, you would want to look
for a old UHF / VHF television antenna such as the Radio Shack VU 190.
Rob the elements off the antenna, cut them to length and mount your
gamma match to it with a appropriate sized reflector.

There was a channel master VHF antenna that was made back in the 1970's
that was about 24 feet long which also made a excellent donor antenna /
platform for a home brew beam antenna.

--
Channel Jumper

167. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-16 17:18:09 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkhvfqh.ei2.nomail@xs8.xs4all.nl>
Source record: 390

Channel Jumper <Channel.Jumper.b657399@radiobanter.com> wrote:
> If you are serious about building that antenna, you would want to look
> for a old UHF / VHF television antenna such as the Radio Shack VU 190.
> Rob the elements off the antenna, cut them to length and mount your
> gamma match to it with a appropriate sized reflector.
>
> There was a channel master VHF antenna that was made back in the 1970's
> that was about 24 feet long which also made a excellent donor antenna /
> platform for a home brew beam antenna.

In those days, we could buy raw stock from the bureau of the amateur radio association, who obtained it from local antenna manufacturers that we still had back then.

Dipoles already to size for VHF/UHF bands, and elements to the maximal length required for each band, that you cut down to the correct length for your design.

Those elements already had the mounting block and bolt just like the commercial TV antennas. I made 2M and 70cm crossed yagis for satellite operation out of those parts.

168. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-16 18:08:08 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <JoidnaHFfbOUVoLMnZ2dnUVZ_vGdnZ2d@earthlink.com>
Source record: 391

"Sal" <salmonella@food poisoning.org> wrote in message
news:kfncjo$rj6$1@dont-email.me...
> I'm building a yagi from the measurement tables the ARRL Antenna Book. I
> have the driven element finished and getting a good SWRs with a home-made
> gamma match.
>
> I'm going to mount it on a wood 2 X 2 with as many directors as will fit
> on an 8 feet boom.
>
> Any advice? (I've already read that a gamma match is a poor choice but it
> did work, so we can skip that one. :-)
>

While not what you want to hear, scrap that idea. Look at the Quagi antenna
and a 10 foot piece of the grey plastic electrical conduit. I built one
from an old handbook design years ago and it worked great. Compaired it to
a comercial Crushcraft 11 element beam and also a 6 element home built one,
all at the top of a 40 foot push up pole, one at a time. I used some
stainless steel welding rods for the directors and some fiberglass sticks
about 1/4 inch in diameter for the quad spreaders from those bicycle flags.

169. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-17 02:41:56 UTC
From: tom <news4792@taring.org>
Message-ID: <--Wdndi9_a3t3r3MnZ2dnUVZ_jydnZ2d@iphouse.net>
Source record: 392

On 2/16/2013 1:31 AM, Sal wrote:
> I'm building a yagi from the measurement tables the ARRL Antenna Book. I
> have the driven element finished and getting a good SWRs with a home-made
> gamma match.
>
> I'm going to mount it on a wood 2 X 2 with as many directors as will fit on
> an 8 feet boom.
>
> Any advice? (I've already read that a gamma match is a poor choice but it
> did work, so we can skip that one. :-)
>
> "Sal"
> (KD6VKW)
>
>

A gamma match will skew the pattern a bit but that's really nothing to
worry about.

The worry on a gamma match (and most matches) is where the impedance of
the driven element is low, where low is less than 20 ohms.

20 ohms is a number I like, others may like a different number. For
sure if you are down in the 10 or 12 ohm range you are in trouble.

T matches are better, but are more and less complex at the same time.
Personally I use gamma at 6m, both at 2m and T at 70cm.

tom
K0TAR

170. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-17 03:57:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ski0i89iden0fnjrpef2egunh10j2s13ni@4ax.com>
Source record: 393

On Fri, 15 Feb 2013 23:31:52 -0800, "Sal" <salmonella@food
poisoning.org> wrote:

>I'm building a yagi from the measurement tables the ARRL Antenna Book.

Which Antenna Book and which yagi?

>I have the driven element finished and getting a good SWRs with a home-made
>gamma match.

Think about using a T-match. Slightly better bandwidth and slightly
more symmetrical pattern. However, I will conceded that the Gamma
match (half a T-match) is simpler because it can be driven directly
without a balun.

I prefer a folded dipole driven element (200 ohms) and a 4:1 balun.
With 200 ohms.

>I'm going to mount it on a wood 2 X 2 with as many directors as will fit on
>an 8 feet boom.

The problem with wood is that it doesn't survive well on top of a
tower. You could paint and preserve it, but by the time you're done,
a metal pipe would probably have been easier. 2x2 also seems a bit
light to support its own weight (plus any birds that may want to
roost). I would suggest a 2x4. Wood is also hygroscopic (absorbs
water), which might have an effect depending on how the antenna is
built.

Drivel: About 15 years ago, I had the semi-bright idea of building an
all wood portable yagi for 440MHz. It was built as if it were a
carpentry project complete with mostly non-metallic joinery. To turn
it into a real antenna, I covered the wooden dowel elements with
aluminum duct tape.
<http://www.homedepot.com/Paint-Adhesives-Tape/h_d1/N-5yc1vZ1xhmZarpz/R-100030120/h_d2/Pro
ductDisplay?catalogId=10053#.USBOGfIrFR0>
The T-match and balun were attached with U shape staples. Sorry, I
didn't take any photos. After about month of tinkering, I turned it
into firewood. The problem was that trimming this antenna was rather
difficult. As the wood in the elements dried out, the velocity factor
changed, causing the element tuning to change. Of course, I used the
cheapest green lumber I could find, resulting in a continuously
changing VSWR as the wood slowly dried out in the sun. You won't have
that problem if you make only the boom out of wood.

>Any advice? (I've already read that a gamma match is a poor choice but it
>did work, so we can skip that one. :-)

Measure the 2:1 VSWR bandwidth of the antenna. If it's too narrow to
cover the 220 band, think about using a T-match and balun.

With an 8 foot boom, you'll probably fit 9 elements:
<http://www.vk5dj.com/yagi.html>
13dBi gain, 44 degree beamwidth.

Idea: I was at the hardware store today and noticed some 2"x3"x10ft
rectangular cross section vinyl rain gutter downspouts. A downspout
might make a usable boom for a yagi.
<http://www.lowes.com/pd_12493-322-AW200_4294806370__?productId=1007997>
It's quite light, doesn't sag, UV proof, and cheap.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

171. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-17 05:21:01 UTC
From: tom <news4792@taring.org>
Message-ID: <DaGdncRjrPgl9b3MnZ2dnUVZ_vSdnZ2d@iphouse.net>
Source record: 394

On 2/16/2013 9:57 PM, Jeff Liebermann wrote:
> On Fri, 15 Feb 2013 23:31:52 -0800, "Sal" <salmonella@food
> poisoning.org> wrote:
>
>> I'm building a yagi from the measurement tables the ARRL Antenna Book.
>
> Which Antenna Book and which yagi?
>
>> I have the driven element finished and getting a good SWRs with a home-made
>> gamma match.
>
> Think about using a T-match. Slightly better bandwidth and slightly
> more symmetrical pattern. However, I will conceded that the Gamma
> match (half a T-match) is simpler because it can be driven directly
> without a balun.
>
> I prefer a folded dipole driven element (200 ohms) and a 4:1 balun.
> With 200 ohms.
>
>> I'm going to mount it on a wood 2 X 2 with as many directors as will fit on
>> an 8 feet boom.
>
> The problem with wood is that it doesn't survive well on top of a
> tower. You could paint and preserve it, but by the time you're done,
> a metal pipe would probably have been easier. 2x2 also seems a bit
> light to support its own weight (plus any birds that may want to
> roost). I would suggest a 2x4. Wood is also hygroscopic (absorbs
> water), which might have an effect depending on how the antenna is
> built.
>
> Drivel: About 15 years ago, I had the semi-bright idea of building an
> all wood portable yagi for 440MHz. It was built as if it were a
> carpentry project complete with mostly non-metallic joinery. To turn
> it into a real antenna, I covered the wooden dowel elements with
> aluminum duct tape.
> <http://www.homedepot.com/Paint-Adhesives-Tape/h_d1/N-5yc1vZ1xhmZarpz/R-100030120/h_d2/P
roductDisplay?catalogId=10053#.USBOGfIrFR0>
> The T-match and balun were attached with U shape staples. Sorry, I
> didn't take any photos. After about month of tinkering, I turned it
> into firewood. The problem was that trimming this antenna was rather
> difficult. As the wood in the elements dried out, the velocity factor
> changed, causing the element tuning to change. Of course, I used the
> cheapest green lumber I could find, resulting in a continuously
> changing VSWR as the wood slowly dried out in the sun. You won't have

> that problem if you make only the boom out of wood.
>
>> Any advice? (I've already read that a gamma match is a poor choice but it
>> did work, so we can skip that one. :-)
>
> Measure the 2:1 VSWR bandwidth of the antenna. If it's too narrow to
> cover the 220 band, think about using a T-match and balun.
>
> With an 8 foot boom, you'll probably fit 9 elements:
> <http://www.vk5dj.com/yagi.html>
> 13dBi gain, 44 degree beamwidth.
>
> Idea: I was at the hardware store today and noticed some 2"x3"x10ft
> rectangular cross section vinyl rain gutter downspouts. A downspout
> might make a usable boom for a yagi.
> <http://www.lowes.com/pd_12493-322-AW200_4294806370__?productId=1007997>
> It's quite light, doesn't sag, UV proof, and cheap.
>

Nice response.

tom
K0TAR

172. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-17 06:24:51 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ngt0i8lddsni2pb8i66jdimfkq2h6lvlr6@4ax.com>
Source record: 395

On Sat, 16 Feb 2013 19:57:44 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>With an 8 foot boom, you'll probably fit 9 elements:
><http://www.vk5dj.com/yagi.html>
>13dBi gain, 44 degree beamwidth.

Here's another yagi calculator program:
<http://www.yagicad.com/YagiCAD/YagiCAD.htm>
It will do a variety of driven elements and yagi styles. It also
exports results to 4NEC2.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

173. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-17 19:22:49 UTC
From: Paul Drahn <pdrahn@webformixair.com>
Message-ID: <kfrakujqt1@dont-email.me>
Source record: 396

On 2/16/2013 10:08 AM, Ralph Mowery wrote:
> "Sal"<salmonella@food poisoning.org> wrote in message
> news:kfncjo$rj6$1@dont-email.me...
>> I'm building a yagi from the measurement tables the ARRL Antenna Book. I
>> have the driven element finished and getting a good SWRs with a home-made
>> gamma match.
>>
>> I'm going to mount it on a wood 2 X 2 with as many directors as will fit
>> on an 8 feet boom.
>>
>> Any advice? (I've already read that a gamma match is a poor choice but it
>> did work, so we can skip that one. :-)
>>
>
> While not what you want to hear, scrap that idea. Look at the Quagi antenna
> and a 10 foot piece of the grey plastic electrical conduit. I built one
> from an old handbook design years ago and it worked great. Compaired it to
> a comercial Crushcraft 11 element beam and also a 6 element home built one,
> all at the top of a 40 foot push up pole, one at a time. I used some
> stainless steel welding rods for the directors and some fiberglass sticks
> about 1/4 inch in diameter for the quad spreaders from those bicycle flags.
>
>
>
>
I concur! I disassembled my 2 meter quagi antennas and an the process of
building a 222 MHz quagi from using the parts. I also use 1/8 inch
stainless steel welding rods, because I have a bunch of them!

The 2 meter quagi antennas worked great and I expect the 222 antenna to
work well, also.

Paul, KD7HB

174. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-18 01:51:46 UTC
From: tom <news4792@taring.org>
Message-ID: <2LudnSFXCNuvFLzMnZ2dnUVZ_tednZ2d@iphouse.net>
Source record: 397

On 2/17/2013 12:24 AM, Jeff Liebermann wrote:
> On Sat, 16 Feb 2013 19:57:44 -0800, Jeff Liebermann <jeffl@cruzio.com>
> wrote:
>
>> With an 8 foot boom, you'll probably fit 9 elements:
>> <http://www.vk5dj.com/yagi.html>
>> 13dBi gain, 44 degree beamwidth.
>
> Here's another yagi calculator program:
> <http://www.yagicad.com/YagiCAD/YagiCAD.htm>
> It will do a variety of driven elements and yagi styles. It also
> exports results to 4NEC2.
>
>

My calculation, based on a database of 100+ EME antennas predicts 13.6
dBi maximum reasonable gain. So that sounds about right.

tom
K0TAR

175. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-18 03:44:17 UTC
From: ltdoc@yahoo.com
Message-ID: <ffa43b72-9a95-4019-871b-34c3de9532ab@googlegroups.com>
Source record: 398

For the original question.
All the in production dual band antennas are going to be fairly comparable, so pick the one that you can afford. The more gain it may have (within reason) the better off you are. I'll add the Comet line of dual band antennas in the rest of the opinions already expressed. Are they 'better' than all the rest? I haven't the slightest clue, but the ones I have are certainly comparable.

As for a monitoring antenna, since you've got a 50 foot tower, run a wire antenna off of it. Cheap, variable length possibilities, and they tend to work. If it's strictly for monitoring, just run a wire as long as possible and end feed it. Will be good for transmitting? That's not likely without a lot of effort, but it'll 'listen' real well. And it's cheap.
There is no such thing as a 'do it all well' antenna. They are about like all the other "one size fit's all" thingys, no they don't.
And probably the most profound argument you can be given is that it's VERY doubtful if you only have one antenna for anything. Or one antenna for very long...
- 'Doc

176. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-18 03:44:46 UTC
From: tom <news4792@taring.org>
Message-ID: <w8mdnd6_CpYzPrzMnZ2dnUVZ_gCdnZ2d@iphouse.net>
Source record: 399

On 2/17/2013 7:51 PM, tom wrote:

> My calculation, based on a database of 100+ EME antennas predicts 13.6
> dBi maximum reasonable gain. So that sounds about right.
>
> tom
> K0TAR
>

Here is a link to a table of a lot of high performance yagis.

http://www.sm2cew.com/gt.htm

tom
K0TAR

177. INDIAN HOT VIDEOS AND LIP KISS PHOTOS TO U TH 66-

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-19 07:09:27 UTC
From: LPWS <3ghfhfffgg@gmail.com>
Message-ID: <4fb3b15e-f24f-4446-b0a8-84dc6309781d@or10g2000pbc.googlegroups.com>
Source record: 400

tollywood actreses hot
http://indianbtphotos.blogspot.in/2013/02/tollywood-actreses.html
tamil actrsese hot
http://indianbtphotos.blogspot.in/2013/02/tamil-actrsese-hot.html
kollywood hot
http://indianbtphotos.blogspot.in/2013/02/kollywood-hot.html
south hot
http://indianbtphotos.blogspot.in/2013/02/south-hot.html
shakeela hot
http://indianbtphotos.blogspot.in/2013/02/shakeela-hot.html
bollywood hot
http://indianbtphotos.blogspot.in/2013/02/bollywood-hot.html

178. Re: Dual band antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-20 02:32:54 UTC
From: tom <news4792@taring.org>
Message-ID: <1uCdnUDwqOBJqLnMnZ2dnUVZ_v2dnZ2d@iphouse.net>
Source record: 101

On 2/13/2013 9:50 PM, tom wrote:
> On 2/12/2013 10:15 PM, nm5k@wt.net wrote:
>
>> Well maybe as far as the standard Ringo, which is a half wave.
>> But the Ringo Ranger was a dual 5/8 collinear. Seems to me that
>> design was used more to get more gain vs the shorter antennas,
>> rather than trying to avoid radials.
>>
>> When it first came out, decoupling from the feed line was not
>> given too much consideration, at least for lower cost amateur
>> antennas.. And most that used it, thought it did OK. Likely
>> because they had nothing better to compare to, or the feed line
>> lengths, mounting, did not skew that pattern as bad in some
>> cases, as it did others. The amount of skewing will vary some
>> in each installation. It was pretty bad in my case. :(
>>
>> But then the Isopole came out.. And the roof caved in. lol..
>> The Isopole was so much better performing than the regular
>> Ringo Ranger, that Cushcraft had no choice but to add some
>> method of decoupling to their antenna, if they wanted to
>> continue to sell many of them.
>> So they added the lower 50 inches of coax, and a set of
>> 1/4 wave radials at the bottom of that length of coax, which
>> was grounded at that point, to the mast supporting the antenna.
>>
>> The decoupling section helped greatly, and saved Cushcraft
>> from certain VHF vertical sales ruination.
>> It was still slightly inferior to the method the Isopole
>> used, but close enough to keep them in the game.
>> Many preferred the RR2 because it was a bit less ugly than
>> the Isopole. And maybe a bit cheaper, but I can't remember
>> how they were priced at the time.
>
> I have a Cushcraft engineering connection from that era. I will seen
> what I can learn.
>
> tom
> K0TAR
>
>
>

Spent a while on the phone with Joe. Most was about other things for an
hour and a half.

Story as I know it -

Dateline was mid 70's. A local ham (unknown) designed a CB antenna that was the original Ranger. It was copied by Lester Cushman.

It was redone as antennas for 6 and 2. And it had decoupling issues.

And Dave Olean (still well known) was assigned to handle the decoupling issues.

And that's what we know.

tom
K0TAR

179. New antenna modeling software

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-21 17:49:30 UTC
From: Dan Maguire <Dan.Maguire.b6c5f78@radiobanter.com>
Message-ID: <Dan.Maguire.b6c5f78@radiobanter.com>
Source record: 102

AutoEZ is a new Excel application that works in conjunction with the EZNEC antenna modeling program. You can use variables to control diverse aspects of the model and then run multiple EZNEC test cases while automatically changing one or more variables between runs. AutoEZ can take full advantage of all the features new to EZNEC v. 5.0 such as virtual wires, realistic transmission lines with loss, transformers, L networks (which can be combined to form T and Pi networks), and parallel connected loads. An overview of what AutoEZ is all about may be found at http://ac6la.com/autoez.html

The user guide has many illustrated examples, such as: (The shortened "is.gd" links below go to images from the user guide, but if you don't feel comfortable following them you won't offend me!)
* Radiation plots in both polar and rectangular format (http://is.gd/4Rs1ic)
* Pattern changes for different heights above ground (http://is.gd/4ubxSJ)
* Loop Fed Array Yagi (http://is.gd/xh7kOi)
* AutoEZ "Both in Sync" feature (http://is.gd/1QGIwB)
* 5-band quad with automatic source placement switching (http://is.gd/uUjmK4)
* Series section and shunt stub impedance matching (http://is.gd/GwJ5ui)
* Typical auto-tuner (http://is.gd/oiV8lP)
* 4-square vertical array (http://is.gd/myPnab)
* 2x2 Yagi stack (http://is.gd/SCvOgF) and feed system (http://is.gd/wSJo9i)
* Stubs for harmonic suppression (http://is.gd/rU4BEH)
* "Variable-ize" an existing EZNEC model (http://is.gd/0qlEG8)

Note: If you purchased the MultiNEC program years ago you should have received a recent email concerning AutoEZ. If not, please contact me directly (not via this list) using the email address found on my home page, http://ac6la.com/.

Dan, AC6LA

--
Dan Maguire

180. Anyone here use an Ultimax100 end fed antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-23 01:02:39 UTC
From: Bob <not@real.com>
Message-ID: <mv4gi8tpu23keo4h2bgjm83fbenj4th0on@4ax.com>
Source record: 103

I purchased an Ultimax100 end fed antenna, and am curious if anyone here has used one before and if you have any advice on the best orientation for it, horizontal, vertical, or slope? I checked eHam.net for reviews and they were favorable, 4+'s and 5's.

Thanks,
Bob KB2ZGN

181. Re: Anyone here use an Ultimax100 end fed antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-23 02:44:13 UTC
From: tom <news4792@taring.org>
Message-ID: <rcmdnc0dC8tlsbXMnZ2dnUVZ_qadnZ2d@iphouse.net>
Source record: 104

On 2/22/2013 7:02 PM, Bob wrote:
> I purchased an Ultimax100 end fed antenna, and am curious if anyone here has
> used one before and if you have any advice on the best orientation for it,
> horizontal, vertical, or slope? I checked eHam.net for reviews and they were
> favorable, 4+'s and 5's.
>
> Thanks,
> Bob KB2ZGN
>

Looking at the description it requires an antenna tuner, which means you are going to tune until matched anyway. That would mean that you can mount it any way you'd like and then match it.

Your results will depend on the local environment. Whether it's a sloper, or another configuration it will be catch as catch can since you can (will? you didn't say) be using it on multiple bands.

If you plan to use it on multiple bands, higher and farther away from other conductive things is better.

Sorry to give a non-answer but you didn't say if you were using it on one band or many, or if you planned to trim it to resonance on a single band.

And eHam reviews (as well as the rest) are worth what you pay for them.

tom
K0TAR

182. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-23 04:45:39 UTC
From: Sal <salmonella@food>
Message-ID: <kg9hef$o77$1@dont-email.me>
Source record: 105

"tom" <news4792@taring.org> wrote in message
news:w8mdnd6_CpYzPrzMnZ2dnUVZ_gCdnZ2d@iphouse.net...
> On 2/17/2013 7:51 PM, tom wrote:
>
>> My calculation, based on a database of 100+ EME antennas predicts 13.6
>> dBi maximum reasonable gain. So that sounds about right.
>>
>> tom
>> K0TAR
>>
>
> Here is a link to a table of a lot of high performance yagis.
>
> http://www.sm2cew.com/gt.htm
>
> tom
> K0TAR
>
>

Thank you all for your thoughtful comments. I like the downspout idea. (I was going to coat the wood boom with good epoxy paint, but, considering also the weight issue, maybe I should go with the downspout. It's going on a chimney mount, not a tower, making maintenance a bit simpler.)

I saw the T-match but never intended to try it. I did get my gamma match to a 1.2:1 VSWR so, now I'm undecided.

I used to use YAGICAD running under a BASIC interpreter, I think, but a lo-o-ong time ago. I will have a fresh look at it.

I thought after the first four or five directors were in place, their spacing wouldn't be affected by adding more directors. Thanks for the heads-up that it matters.

"Sal"

183. Re: Anyone here use an Ultimax100 end fed antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-23 06:05:00 UTC
From: Bob <not@real.com>
Message-ID: <uulgi8tf08k07pg8nj3i0o1ivnie386ubu@4ax.com>
Source record: 106

On Fri, 22 Feb 2013 20:44:13 -0600, tom <news4792@taring.org> wrote:

>On 2/22/2013 7:02 PM, Bob wrote:
>> I purchased an Ultimax100 end fed antenna, and am curious if anyone here has
>> used one before and if you have any advice on the best orientation for it,
>> horizontal, vertical, or slope? I checked eHam.net for reviews and they were
>> favorable, 4+'s and 5's.
>>
>> Thanks,
>> Bob KB2ZGN
>>
>
>Looking at the description it requires an antenna tuner, which means you
>are going to tune until matched anyway. That would mean that you can
>mount it any way you'd like and then match it.
>
>Your results will depend on the local environment. Whether it's a
>sloper, or another configuration it will be catch as catch can since you
>can (will? you didn't say) be using it on multiple bands.
>
>If you plan to use it on multiple bands, higher and farther away from
>other conductive things is better.
>
>Sorry to give a non-answer but you didn't say if you were using it on
>one band or many, or if you planned to trim it to resonance on a single
>band.
>
>And eHam reviews (as well as the rest) are worth what you pay for them.
>
>tom
>K0TAR

Thanks tom, and I apologize for not providing more details, I guess I just didn't think before hand.

I will be using it with several radios, an IC-703+, (built in auto-tuner) IC-706MKII and IC-7000, (LDG add-on auto-tuner for these last 2). The antenna comes with a matching network in a sealed enclosure, and is very well built using quality hardware. I also have an RF isolator to prevent common mode current in the coax shield. The antenna is supposed to be capable of 3 to 54 MHz with an antenna tuner, (I'm hoping to use as many bands as possible) and will handle the legal limit of 1500 watts. Maybe I'll be better off with my AH-4 and a random length wire antenna, but space is limited. That's why I'm trying this one.

Thanks again tom, and 73,
Bob KB2ZGN

184. Re: Anyone here use an Ultimax100 end fed antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-23 15:23:46 UTC
From: W5DXP <w5dxp@hotmail.com>
Message-ID: <971f39e9-9c6d-46de-9ed8-5f7bcf701dab@googlegroups.com>
Source record: 107

On Friday, February 22, 2013 7:02:39 PM UTC-6, Bob wrote:
> ... any advice on the best orientation for it,

Everything before the wire part is a power transfer system with certain known/measurable disadvantages such as efficiency. The wire part is the radiator and obeys the same laws of physics as any other wire so the rules that apply to other wire antennas also apply to that wire antenna, e.g. at least 1/4WL in height for horizontal mounting, no more than 5/8WL long if mounted vertically, etc.
--
73, Cecil, w5dxp.com

185. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-23 23:53:02 UTC
From: Sal <salmonella@food>
Message-ID: <kgbkm4sbt1@dont-email.me>
Source record: 108

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:ski0i89iden0fnjrpef2egunh10j2s13ni@4ax.com...
> On Fri, 15 Feb 2013 23:31:52 -0800, "Sal" <salmonella@food
> poisoning.org> wrote:
>
>>I'm building a yagi from the measurement tables the ARRL Antenna Book.
>
> Which Antenna Book and which yagi?
>
>>I have the driven element finished and getting a good SWRs with a
>>home-made
>>gamma match.
>
> Think about using a T-match. Slightly better bandwidth and slightly
> more symmetrical pattern. However, I will conceded that the Gamma
> match (half a T-match) is simpler because it can be driven directly
> without a balun.
>
> I prefer a folded dipole driven element (200 ohms) and a 4:1 balun.
> With 200 ohms.
>
>>I'm going to mount it on a wood 2 X 2 with as many directors as will fit
>>on
>>an 8 feet boom.
>
> The problem with wood is that it doesn't survive well on top of a
> tower. You could paint and preserve it, but by the time you're done,
> a metal pipe would probably have been easier. 2x2 also seems a bit
> light to support its own weight (plus any birds that may want to
> roost). I would suggest a 2x4. Wood is also hygroscopic (absorbs
> water), which might have an effect depending on how the antenna is
> built.
>
> Drivel: About 15 years ago, I had the semi-bright idea of building an
> all wood portable yagi for 440MHz. It was built as if it were a
> carpentry project complete with mostly non-metallic joinery. To turn
> it into a real antenna, I covered the wooden dowel elements with
> aluminum duct tape.
> <http://www.homedepot.com/Paint-Adhesives-Tape/h_d1/N-5yc1vZ1xhmZarpz/R-100030120/h_d2/P
roductDisplay?catalogId=10053#.USBOGfIrFR0>
> The T-match and balun were attached with U shape staples. Sorry, I
> didn't take any photos. After about month of tinkering, I turned it
> into firewood. The problem was that trimming this antenna was rather
> difficult. As the wood in the elements dried out, the velocity factor

> changed, causing the element tuning to change. Of course, I used the
> cheapest green lumber I could find, resulting in a continuously
> changing VSWR as the wood slowly dried out in the sun. You won't have
> that problem if you make only the boom out of wood.
>
>>Any advice? (I've already read that a gamma match is a poor choice but it
>>did work, so we can skip that one. :-)
>
> Measure the 2:1 VSWR bandwidth of the antenna. If it's too narrow to
> cover the 220 band, think about using a T-match and balun.
>
> With an 8 foot boom, you'll probably fit 9 elements:
> <http://www.vk5dj.com/yagi.html>
> 13dBi gain, 44 degree beamwidth.
>
> Idea: I was at the hardware store today and noticed some 2"x3"x10ft
> rectangular cross section vinyl rain gutter downspouts. A downspout
> might make a usable boom for a yagi.
> <http://www.lowes.com/pd_12493-322-AW200_4294806370__?productId=1007997>
> It's quite light, doesn't sag, UV proof, and cheap.
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558

186. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-24 01:07:31 UTC
From: Sal <salmonella@food>
Message-ID: <kgbp1o$ep6$1@dont-email.me>
Source record: 109

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:ski0i89iden0fnjrpef2egunh10j2s13ni@4ax.com...
> On Fri, 15 Feb 2013 23:31:52 -0800, "Sal" <salmonella@food
> poisoning.org> wrote:
>
>>I'm building a yagi from the measurement tables the ARRL Antenna Book.
>
> Which Antenna Book and which yagi?

< snip >

Jeff, I have the 18th Edition of the ARRL Antenna Book, copyright 1997.

I'm in Chapter 18, titled "VHF and UHF Antenna Systems." I'm using Table 16, titled "Dimensions for 16-element 3.9-wavelength 222-MHz Yagi."

I'm bugged by something else I'm seeing. Table 16 specifies a 664 mm driven element (DE) It's longer than the DE of other construction articles. Most articles call for something between 645 and 648 mm. (Example: On the same page as Table 16, I see also Table 14, "Free-Space Dimensions for the 222-MHz Yagi Family." It gives a DE of 647 mm.)

Something is indisputably okay. My prototype DE (664 mm) is hanging by strings above my bench and I'm getting a 1.2:1 - 1.3:1 with a short length of cable. I can hit a repeater 15 miles away with one watt without even turning my DE vertical. Too bad neither of my analyzers works at 222.

Yes, I fully expect the match to need adjusting after I add parasitic elements. The road from here-to-there has so many branches!

"Sal"

187. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-24 03:33:30 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <au0ji8pkfplvutsbiuhgd6u81sgisdpb21@4ax.com>
Source record: 110

On Sat, 23 Feb 2013 17:07:31 -0800, "Sal" <salmonella@food
poisoning.org> wrote:

>
>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:ski0i89iden0fnjrpef2egunh10j2s13ni@4ax.com...
>> On Fri, 15 Feb 2013 23:31:52 -0800, "Sal" <salmonella@food
>> poisoning.org> wrote:
>>
>>>I'm building a yagi from the measurement tables the ARRL Antenna Book.
>>
>> Which Antenna Book and which yagi?
>
>< snip >
>
>Jeff, I have the 18th Edition of the ARRL Antenna Book, copyright 1997.
>I'm in Chapter 18, titled "VHF and UHF Antenna Systems." I'm using Table
>16, titled "Dimensions for 16-element 3.9-wavelength 222-MHz Yagi."

I have the 19th edition. Same table on Pg 18-31.

>I'm bugged by something else I'm seeing. Table 16 specifies a 664 mm driven
>element (DE) It's longer than the DE of other construction articles. Most
>articles call for something between 645 and 648 mm. (Example: On the same
>page as Table 16, I see also Table 14, "Free-Space Dimensions for the
>222-MHz Yagi Family." It gives a DE of 647 mm.)

That's easy. Both antennas have elements connected to the aluminum
boom (except for the driven element). Looks like the boom diameters
are different. When the elements are connected to the boom in this
manner, the boom becomes part of the element in that the conduction
path now goes around the boom. This tends to shorten the element
lengths. All the various yagi designer programs can include the boom
diameter in their calculations. I strongly suggest that unless you're
building EXACTLY what's in the article, that you use one of the
programs previous mentioned to grind the numbers correctly.

In addition, I have a suggestion. If you're using a solid rod for the
elements, round off the ends to a hemispherical radius. Use 1/2 the
distance between the base of the radius and the peak for the element
end point. If you're using hollow tubing, you can also cram a big
rivet or screw into the end to get the same rounded effect. This will
increase your usable bandwidth.

>Something is indisputably okay. My prototype DE (664 mm) is hanging by
>strings above my bench and I'm getting a 1.2:1 - 1.3:1 with a short length

>of cable. I can hit a repeater 15 miles away with one watt without even
>turning my DE vertical. Too bad neither of my analyzers works at 222.

Please note that you also get 1:1 with a dummy load. You can also
match just about anything with your gamma match. Tune the antenna for
gain, bandwidth, and/or F/B ratio. VSWR is easy to fix.

Also VSWR is not as important as pattern and gain. You can get
perfect VSWR, and have the signal sprayed all over the place. If you
look at the antenna patterns on the same pages as the tables, you'll
see that even with a properly designed antenna, you have a rather
strange and skewed pattern. Incidentally, T-match and balun should
fix the funny pattern.

>Yes, I fully expect the match to need adjusting after I add parasitic
>elements. The road from here-to-there has so many branches!

Not really. The first 4 or 5 elements are what provides the VSWR. Try
waving additional elements around the front of the antenna notice how
little the VSWR changes. However, the gain, directivity, and F/B
ratio certainly will be affected.

As for your lack of an antenna analyzer, this is actually a good
thing. What you really want to do is see what the antenna is doing
over a wide range of frequencies. For that, I suggest a return loss
bridge. I use a Telonic Rho-tector Model TRB-50 and a Texscan RCB-3.
Here's what's inside:
<http://www.qsl.net/n9zia/rlb/texscan.png>
Both will go from 0.5MHz to 1GHz. All you need is a decent RF sweep
generator, oscilloscope, terminators, and cables. You can see the
VSWR curve over the frequency range while you're tuning. You can also
do the same thing with a directional coupler and a diode detector, but
I think the return loss bridge is easier. I've also built a few for
microwave frequencies (2.4 and 5.7GHz).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

188. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-24 03:48:24 UTC
From: tom <news4792@taring.org>
Message-ID: <XuSdnUwB7ukfELTMnZ2dnUVZ_uqdnZ2d@iphouse.net>
Source record: 111

On 2/23/2013 9:33 PM, Jeff Liebermann wrote:
> On Sat, 23 Feb 2013 17:07:31 -0800, "Sal" <salmonella@food
> poisoning.org> wrote:
>
>>
>> "Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>> news:ski0i89iden0fnjrpef2egunh10j2s13ni@4ax.com...
>>> On Fri, 15 Feb 2013 23:31:52 -0800, "Sal" <salmonella@food
>>> poisoning.org> wrote:
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>>>> I'm building a yagi from the measurement tables the ARRL Antenna Book.
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>>> Which Antenna Book and which yagi?
>>
>> < snip >
>>
>> Jeff, I have the 18th Edition of the ARRL Antenna Book, copyright 1997.
>> I'm in Chapter 18, titled "VHF and UHF Antenna Systems." I'm using Table
>> 16, titled "Dimensions for 16-element 3.9-wavelength 222-MHz Yagi."
>
> I have the 19th edition. Same table on Pg 18-31.
>
>> I'm bugged by something else I'm seeing. Table 16 specifies a 664 mm driven
>> element (DE) It's longer than the DE of other construction articles. Most
>> articles call for something between 645 and 648 mm. (Example: On the same
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>> 222-MHz Yagi Family." It gives a DE of 647 mm.)
>
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> boom (except for the driven element). Looks like the boom diameters
> are different. When the elements are connected to the boom in this
> manner, the boom becomes part of the element in that the conduction
> path now goes around the boom. This tends to shorten the element
> lengths. All the various yagi designer programs can include the boom
> diameter in their calculations. I strongly suggest that unless you're
> building EXACTLY what's in the article, that you use one of the
> programs previous mentioned to grind the numbers correctly.
>
> In addition, I have a suggestion. If you're using a solid rod for the
> elements, round off the ends to a hemispherical radius. Use 1/2 the
> distance between the base of the radius and the peak for the element
> end point. If you're using hollow tubing, you can also cram a big
> rivet or screw into the end to get the same rounded effect. This will
> increase your usable bandwidth.

>
>> Something is indisputably okay. My prototype DE (664 mm) is hanging by
>> strings above my bench and I'm getting a 1.2:1 - 1.3:1 with a short length
>> of cable. I can hit a repeater 15 miles away with one watt without even
>> turning my DE vertical. Too bad neither of my analyzers works at 222.
>
> Please note that you also get 1:1 with a dummy load. You can also
> match just about anything with your gamma match. Tune the antenna for
> gain, bandwidth, and/or F/B ratio. VSWR is easy to fix.
>
> Also VSWR is not as important as pattern and gain. You can get
> perfect VSWR, and have the signal sprayed all over the place. If you
> look at the antenna patterns on the same pages as the tables, you'll
> see that even with a properly designed antenna, you have a rather
> strange and skewed pattern. Incidentally, T-match and balun should
> fix the funny pattern.
>
>> Yes, I fully expect the match to need adjusting after I add parasitic
>> elements. The road from here-to-there has so many branches!
>
> Not really. The first 4 or 5 elements are what provides the VSWR. Try
> waving additional elements around the front of the antenna notice how
> little the VSWR changes. However, the gain, directivity, and F/B
> ratio certainly will be affected.
>
> As for your lack of an antenna analyzer, this is actually a good
> thing. What you really want to do is see what the antenna is doing
> over a wide range of frequencies. For that, I suggest a return loss
> bridge. I use a Telonic Rho-tector Model TRB-50 and a Texscan RCB-3.
> Here's what's inside:
> <http://www.qsl.net/n9zia/rlb/texscan.png>
> Both will go from 0.5MHz to 1GHz. All you need is a decent RF sweep
> generator, oscilloscope, terminators, and cables. You can see the
> VSWR curve over the frequency range while you're tuning. You can also
> do the same thing with a directional coupler and a diode detector, but
> I think the return loss bridge is easier. I've also built a few for
> microwave frequencies (2.4 and 5.7GHz).
>
>
>

One thing to remember is you generally do not want elements that are electrically connected to the boom. The connection is usually not very good and eventually corrodes. This makes the antenna detune in an unpredictable manner.

That said, you can weld elements to the boom, which works.

You are better off using insulated elements with inserts in the boom holes such as Delrin.

This will change the correction factor, but that is a known.

tom
K0TAR

189. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-24 05:12:26 UTC
From: Sal <salmonella@food>
Message-ID: <kgc7ci$4qr$1@dont-email.me>
Source record: 112

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:au0ji8pkfplvutsbiuhgd6u81sgisdpb21@4ax.com...

<snip >

> As for your lack of an antenna analyzer, this is actually a good
> thing. What you really want to do is see what the antenna is doing
> over a wide range of frequencies. For that, I suggest a return loss
> bridge. I use a Telonic Rho-tector Model TRB-50 and a Texscan RCB-3.
> Here's what's inside:
> <http://www.qsl.net/n9zia/rlb/texscan.png>
> Both will go from 0.5MHz to 1GHz. All you need is a decent RF sweep
> generator, oscilloscope, terminators, and cables. You can see the
> VSWR curve over the frequency range while you're tuning. You can also
> do the same thing with a directional coupler and a diode detector, but
> I think the return loss bridge is easier. I've also built a few for
> microwave frequencies (2.4 and 5.7GHz).

I have the o'scope and a sweep generator/ spectrum analyzer combination to provide the RF. I'd have to check to see if the generator provides a sweep signal for the scope's external horizontal input.

The bridge looks like a one-evening project although I might have to hand-make those 1% resistors.

By the way, I found a way of using the sweeper/spec-an combination as a crude antenna checker. I loop the generator directly into the analyzer, but use a T-connector at one of the ports. Of, course, it produces a clean, flat line. Next, if I connect an unterminated length of cable to the T-connector, I see a comb pattern produced by reflected energy. (The comb's appearance is dependent on the length of the cable and the test setup.) Lastly, with an antenna on the end of the cable, the comb goes flat at the frequency (ies) where the antenna is radiating ... reduced reflections at some freqs since the antenna is radiating most of the forward power. It's an interesting effect to observe but not sensitive enough for much more than a GO/NOGO check.

If I put the T-connector at the antenna, itself, with one cable each to the sweeper/spec-an, the pattern changes somewhat but I haven't analyzed what I see.

"Sal"

190. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-24 05:41:39 UTC
From: Sal <salmonella@food>
Message-ID: <kgc939$a57$1@dont-email.me>
Source record: 113

"tom" <news4792@taring.org> wrote in message
news:XuSdnUwB7ukfELTMnZ2dnUVZ_uqdnZ2d@iphouse.net...

< snip >

> One thing to remember is you generally do not want elements that are
> electrically connected to the boom. The connection is usually not very
> good and eventually corrodes. This makes the antenna detune in an
> unpredictable manner.
>
> That said, you can weld elements to the boom, which works.
>
> You are better off using insulated elements with inserts in the boom holes
> such as Delrin.
>
> This will change the correction factor, but that is a known.
>
> tom
> K0TAR
>

At the moment, my driven element is 664 mm of half-inch copper pipe, my favorite medium for VHF/UHF antennas. I made some antennas for the RACES station at the local firehouse about fifteen years ago and they're still up there.

If I were to continue in that vein, I could weld (torch solder, really) the elements to a longer piece of copper pipe.

I have seen the "known" correction factors referenced in vague terms, but nothing that I ever got my arms around. Where should I be looking?

"Sal"
(KD6VKW)

191. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-25 02:43:22 UTC
From: tom <news4792@taring.org>
Message-ID: <QdqdnSUJdflXUrfMnZ2dnUVZ_oSdnZ2d@iphouse.net>
Source record: 114

On 2/23/2013 11:41 PM, Sal wrote:

> At the moment, my driven element is 664 mm of half-inch copper pipe, my
> favorite medium for VHF/UHF antennas. I made some antennas for the RACES
> station at the local firehouse about fifteen years ago and they're still up
> there.
>
> If I were to continue in that vein, I could weld (torch solder, really) the
> elements to a longer piece of copper pipe.
>
> I have seen the "known" correction factors referenced in vague terms, but
> nothing that I ever got my arms around. Where should I be looking?
>
> "Sal"
> (KD6VKW)
>
>

A good source is VE7BQH, Lionel. He has a lot of info related to EME antennas that are as well engineered as possible for obvious reasons.

I've never looked at his correction factors as I have ones for through the boom insulated that I know work for my build type. My corrections are from WB0TEM.

What bands are you building for?

Here's a link to some of Lionel's information at SM2CEW. If you need to correspond with him, contact me directly and I'll get you his email.

http://www.sm2cew.com/gt.htm

tom
K0TAR

192. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-25 03:13:08 UTC
From: tom <news4792@taring.org>
Message-ID: <ypGdnc612pteS7fMnZ2dnUVZ_jqdnZ2d@iphouse.net>
Source record: 115

On 2/24/2013 8:43 PM, tom wrote:
> On 2/23/2013 11:41 PM, Sal wrote:
>
>>
>> At the moment, my driven element is 664 mm of half-inch copper pipe, my
>> favorite medium for VHF/UHF antennas. I made some antennas for the RACES
>> station at the local firehouse about fifteen years ago and they're
>> still up
>> there.
>>
>> If I were to continue in that vein, I could weld (torch solder,
>> really) the
>> elements to a longer piece of copper pipe.
>>
>> I have seen the "known" correction factors referenced in vague terms, but
>> nothing that I ever got my arms around. Where should I be looking?
>>
>> "Sal"
>> (KD6VKW)
>>
>>
>
> A good source is VE7BQH, Lionel. He has a lot of info related to EME
> antennas that are as well engineered as possible for obvious reasons.
>
> I've never looked at his correction factors as I have ones for through
> the boom insulated that I know work for my build type. My corrections
> are from WB0TEM.
>
> What bands are you building for?
>
> Here's a link to some of Lionel's information at SM2CEW. If you need to
> correspond with him, contact me directly and I'll get you his email.
>
> http://www.sm2cew.com/gt.htm
>
> tom
> K0TAR
>

I've done some searching for corrections for through the boom
uninsulated and found that the opinion is that it's not a good idea.
And it makes sense if you read why - the current is really high at the
center of the element and any variation in contact resistance to the

boom or material will change the result.

What you would like is the result to be based on only the insulated element conductance and the shielding of the boom, which is easier to calculate and less variable.

tom
K0TAR

193. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-25 03:26:16 UTC
From: tom <news4792@taring.org>
Message-ID: <vJidnY9itdBFRLfMnZ2dnUVZ_vidnZ2d@iphouse.net>
Source record: 116

On 2/24/2013 9:13 PM, tom wrote:
> I've done some searching for corrections for through the boom
> uninsulated and found that the opinion is that it's not a good idea. And
> it makes sense if you read why - the current is really high at the
> center of the element and any variation in contact resistance to the
> boom or material will change the result.
>
> What you would like is the result to be based on only the insulated
> element conductance and the shielding of the boom, which is easier to
> calculate and less variable.
>
> tom
> K0TAR
>

Here's a reference that mentions reasons for not using uninsulated
through the boom connectio9ns. And has some nice graphs on insulated
through the boom.

http://g7rau.demon.co.uk/sm5bsz/antennas/sa/others.htm

tom
K0TAR

194. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-25 06:38:39 UTC
From: Sal <salmonella@food>
Message-ID: <kgf0p9$9av$1@dont-email.me>
Source record: 117

"tom" <news4792@taring.org> wrote in message
news:QdqdnSUJdflXUrfMnZ2dnUVZ_oSdnZ2d@iphouse.net...
> On 2/23/2013 11:41 PM, Sal wrote:

< snip >

> What bands are you building for?
>
> Here's a link to some of Lionel's information at SM2CEW. If you need to
> correspond with him, contact me directly and I'll get you his email.
>
> http://www.sm2cew.com/gt.htm
>
> tom
> K0TAR
>

BANDS: This is a 220 beam intended for roof mount on my daughter/son-in-law's house in Livermore CA to see if we can hit the Condor Connection, which is all on 220. I'm in San Diego, with a nearby Condor machine. My newly-licensed son-in-law thinks it would be a hoot if we could talk directly, home-to-home. (I don't want to encourage him to buy an HF rig for possible use on 10m, since fickle propagation has the potential to be a buzz kill for a new ham. Upgrade to General is an unknown. He's not ready for IRLP.)

Condor has two possible repeaters, one on Mount Hamilton (24 mi, by San Jose) and one on Mount Vaca (50 mi.). Neither is a slam dunk from Livermore because of terrain blockage. I'm hoping 50W & 10 dB gain will work. I did some Longley Rice modeling here

http://lrcov.crc.ca/main/ and I'm hopeful.

I have alternate possibilities. The WIN System has 440-band repeaters on Mt Oso (25 mi.) and on Loma Prieta (40 mi.) but also with terrain issues. (I already have a 26-element 440 beam; it models out to about 14 dBd gain.)

Those distances would be no problem except for the blockage. I can do 80 miles with 5 watts off an omni if my RF's don't bump into nuthin' first.

I expect the finished 220 beam to have about 10dBd gain and I have 50 watts available.

Thanks for the link to Lionel's info. I'll check itout.

"Sal"
(KD6VKW)

195. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-25 06:50:55 UTC
From: Sal <salmonella@food>
Message-ID: <kgf1g8bir1@dont-email.me>
Source record: 118

"tom" <news4792@taring.org> wrote in message
news:vJidnY9itdBFRLfMnZ2dnUVZ_vidnZ2d@iphouse.net...
> On 2/24/2013 9:13 PM, tom wrote:
>> I've done some searching for corrections for through the boom
>> uninsulated and found that the opinion is that it's not a good idea. And
>> it makes sense if you read why - the current is really high at the
>> center of the element and any variation in contact resistance to the
>> boom or material will change the result.
>>
>> What you would like is the result to be based on only the insulated
>> element conductance and the shielding of the boom, which is easier to
>> calculate and less variable.
>>
>> tom
>> K0TAR
>>
>
> Here's a reference that mentions reasons for not using uninsulated through
> the boom connectio9ns. And has some nice graphs on insulated through the
> boom.
>
> http://g7rau.demon.co.uk/sm5bsz/antennas/sa/others.htm
>
> tom
> K0TAR
>
>

OK, I'm convinced. What I need is some lightweight non-metallic material
for the
boom and I can build with the numbers I have for element lengths. I'll hit
the stores
in the morning.

I'll try a T-match, too.

"Sal"

196. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-26 00:48:41 UTC
From: tom <news4792@taring.org>
Message-ID: <pcqdnRjyhMv3m7HMnZ2dnUVZ_hmdnZ2d@iphouse.net>
Source record: 119

On 2/25/2013 12:38 AM, Sal wrote:

> BANDS: This is a 220 beam intended for roof mount on my
> daughter/son-in-law's house in Livermore CA to see if we can hit the Condor
> Connection, which is all on 220. I'm in San Diego, with a nearby Condor
> machine. My newly-licensed son-in-law thinks it would be a hoot if we could
> talk directly, home-to-home. (I don't want to encourage him to buy an HF
> rig for possible use on 10m, since fickle propagation has the potential to
> be a buzz kill for a new ham. Upgrade to General is an unknown. He's not
> ready for IRLP.)
>
> Condor has two possible repeaters, one on Mount Hamilton (24 mi, by San
> Jose) and one on Mount Vaca (50 mi.). Neither is a slam dunk from Livermore
> because of terrain blockage. I'm hoping 50W & 10 dB gain will work. I did
> some Longley Rice modeling here
>
> http://lrcov.crc.ca/main/ and I'm hopeful.
>
> I have alternate possibilities. The WIN System has 440-band repeaters on Mt
> Oso (25 mi.) and on Loma Prieta (40 mi.) but also with terrain issues. (I
> already have a 26-element 440 beam; it models out to about 14 dBd gain.)
>
> Those distances would be no problem except for the blockage. I can do 80
> miles with 5 watts off an omni if my RF's don't bump into nuthin' first.
>
> I expect the finished 220 beam to have about 10dBd gain and I have 50 watts
> available.
>
> Thanks for the link to Lionel's info. I'll check itout.
>
> "Sal"
> (KD6VKW)
>
>

Sounds like a plan. Good luck.

If there are any 6m machines around the terrain becomes a lot less of a
problem. If, of course, you have a 6m FM rig. Around here, Minneapolis
metro, we have a few machines that have multiple inputs and outputs.
(Not really, they are individual cross-linked rptrs, but that's just
details). Maybe your area has some.

tom
K0TAR

197. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-26 03:50:49 UTC
From: Sal <salmonella@food>
Message-ID: <kghbc1eku1@dont-email.me>
Source record: 120

>>
>
> Sounds like a plan. Good luck.
>
> If there are any 6m machines around the terrain becomes a lot less of a
> problem. If, of course, you have a 6m FM rig. Around here, Minneapolis
> metro, we have a few machines that have multiple inputs and outputs. (Not
> really, they are individual cross-linked rptrs, but that's just details).
> Maybe your area has some.
>
> tom
> K0TAR

Thanks. I've heard 6m is very good that way. I have 6m FM but not my son-in-law ... yet. Besides, I haven't found any linking from Livermore to me in Southern CA.

See, Livermore has plenty of repeaters, both local and in three nearby cities, Tracy, Pleasanton and Danville. Once you get beyond that region, mountains become an issue and the nearest known linked repeaters are not line-of-sight. I'm hoping some antenna gain will let me use edge diffraction to make one of the machines. I'm hoping the first edge out of Livermore will do it. Yes, I have consulted terrain profiles.

Related: At Lowes today, I bought an 8-foot length of stiff, ribbed, plastic channel called "lattice moulding" and it will be the boom for my 1.25m masterwork. It's very rigid in the vertical orientation, which is what I want. If I have time, I'll rebuild the driven element with a T-match.

"Sal"

198. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-26 04:15:05 UTC
From: tom <news4792@taring.org>
Message-ID: <aLGdnXZwOqtUq7HMnZ2dnUVZ_v-dnZ2d@iphouse.net>
Source record: 121
Cross-posted to: rec.radio.amateur.antenna,tar@taring.org

On 2/25/2013 9:50 PM, Sal wrote:

>
> Thanks. I've heard 6m is very good that way. I have 6m FM but not my
> son-in-law ... yet. Besides, I haven't found any linking from Livermore to
> me in Southern CA.
>
> See, Livermore has plenty of repeaters, both local and in three nearby
> cities, Tracy, Pleasanton and Danville. Once you get beyond that region,
> mountains become an issue and the nearest known linked repeaters are not
> line-of-sight. I'm hoping some antenna gain will let me use edge
> diffraction to make one of the machines. I'm hoping the first edge out of
> Livermore will do it. Yes, I have consulted terrain profiles.
>
> Related: At Lowes today, I bought an 8-foot length of stiff, ribbed,
> plastic channel called "lattice moulding" and it will be the boom for my
> 1.25m masterwork. It's very rigid in the vertical orientation, which is
> what I want. If I have time, I'll rebuild the driven element with a
> T-match.
>
> "Sal"

So what you need is a design that will fit on an 8 foot boom. About 7
feet 11 and a half inches. I will see what might work well.

How much was the channel?

tom
K0TAR

199. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-26 20:16:31 UTC
From: Sal <salmonella@food>
Message-ID: <kgj54r$om5$1@dont-email.me>
Source record: 122

"tom" <news4792@taring.org> wrote in message
news:aLGdnXZwOqtUq7HMnZ2dnUVZ_v-dnZ2d@iphouse.net...
> On 2/25/2013 9:50 PM, Sal wrote:
>
>>
>> Thanks. I've heard 6m is very good that way. I have 6m FM but not my
>> son-in-law ... yet. Besides, I haven't found any linking from Livermore
>> to
>> me in Southern CA.
>>
>> See, Livermore has plenty of repeaters, both local and in three nearby
>> cities, Tracy, Pleasanton and Danville. Once you get beyond that region,
>> mountains become an issue and the nearest known linked repeaters are not
>> line-of-sight. I'm hoping some antenna gain will let me use edge
>> diffraction to make one of the machines. I'm hoping the first edge out
>> of
>> Livermore will do it. Yes, I have consulted terrain profiles.
>>
>> Related: At Lowes today, I bought an 8-foot length of stiff, ribbed,
>> plastic channel called "lattice moulding" and it will be the boom for my
>> 1.25m masterwork. It's very rigid in the vertical orientation, which is
>> what I want. If I have time, I'll rebuild the driven element with a
>> T-match.
>>
>> "Sal"
>
> So what you need is a design that will fit on an 8 foot boom. About 7
> feet 11 and a half inches. I will see what might work well.
>
> How much was the channel?
>
> tom
> K0TAR

"I will see what might work well." So, do you think the design from the
antenna book is less than ideal?

The channel is priced at $15.94. I will put some masking tape on my piece
of channel, mark off element positions from various designs, attach the
elements temporarily (tape) and evaluate the resulting antenna.

I will set up a makeshift antenna range, with (1) my tracking generator
feeding a 220 whip radiating from my lawn while (2) a helper in the driveway
aims the antenna and while (3) it send its receive signal into the shack
where I, aka His Royal Hamminess, notes the received signal at various

azimuths. (We don't need any stinkin' anechoic chambers.)

Professionally, I've made quantitative measurements of field strength ... Singer NM-25, anyone? ... but I have nothing approaching modern precision gear as that which rents for hundreds of dollars a week.

RELATED: If you know, why do some yagis designs place the first director quite a bit closer to the DE than the rest of the directors' spacing? In other yagi designs, the spacing of the directors is relatively consistent, where DE-to-first-director is about equal to the spacing of the remaining directors. I haven't seen that difference explained ... yet. Thanks.

"Sal"

200. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-26 21:57:12 UTC
From: dplatt@radagast.org
Message-ID: <omnvv9-ip8.ln1@radagast.org>
Source record: 123

In article <kgj54r$om5$1@dont-email.me>,
Sal <salmonella@food poisoning.org> wrote:

>RELATED: If you know, why do some yagis designs place the first director
>quite a bit closer to the DE than the rest of the directors' spacing? In
>other yagi designs, the spacing of the directors is relatively consistent,
>where DE-to-first-director is about equal to the spacing of the remaining
>directors. I haven't seen that difference explained ... yet. Thanks.

You might be looking at what has become known as an "optimized
wide-band" Yagi.

According to one article (http://www.naic.edu/~angel/kp4ao/ham/owa.html)
placing the first-director parasitic element very close to the
driven element, causes the antenna to be behave as if the driven
element's diameter is much larger than it is (approximating the
distance between the DE and the first director).

This has two useful effects: it increases the radiation resistance
(making the Yagi easier to match to the feedline) and increases the
bandwidth. You give up a small amount of forward gain, but this is
said to be modest and to be a worthwhile price to pay for the ease of
feeding (even a direct 50-ohm feed can be used in some cases) and the
increased bandwidth.

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

201. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-26 23:07:47 UTC
From: Sal <salmonella@food>
Message-ID: <kgjf5mlrc1@dont-email.me>
Source record: 124

"Dave Platt" <dplatt@radagast.org> wrote in message
news:omnvv9-ip8.ln1@radagast.org...
> In article <kgj54r$om5$1@dont-email.me>,
> Sal <salmonella@food poisoning.org> wrote:
>
>>RELATED: If you know, why do some yagis designs place the first director
>>quite a bit closer to the DE than the rest of the directors' spacing? In
>>other yagi designs, the spacing of the directors is relatively consistent,
>>where DE-to-first-director is about equal to the spacing of the remaining
>>directors. I haven't seen that difference explained ... yet. Thanks.
>
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>
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> placing the first-director parasitic element very close to the
> driven element, causes the antenna to be behave as if the driven
> element's diameter is much larger than it is (approximating the
> distance between the DE and the first director).
>
> This has two useful effects: it increases the radiation resistance
> (making the Yagi easier to match to the feedline) and increases the
> bandwidth. You give up a small amount of forward gain, but this is
> said to be modest and to be a worthwhile price to pay for the ease of
> feeding (even a direct 50-ohm feed can be used in some cases) and the
> increased bandwidth.

Wow! Thanks for such a clear explanantion. As I was constructing
my DE, with its gamma match, I didn't have much trouble getting a
decent match; What you say makes me sure that adding parasitic
elements will alter that match ... but the close-in first-director will
mitigate the problem. (I do plan to try the T-match; the gamma
match seems to be like ol' Rodney Dangerfield: No Respect.)

I have no shame in saying that this is my first beam, unless you
count the cookbook 20m 2-element quad for last year's Field Day.
On the flip side, I take pride in tackling everything new, especially
with the support of those who've scouted the road ahead for me.

Thanks again.

"Sal"

202. Re: Homebrew 222 Mhz Beam Antenna Project

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-27 02:55:30 UTC
From: tom <news4792@taring.org>
Message-ID: <SKadnWV3Ltk96LDMnZ2dnUVZ_g2dnZ2d@iphouse.net>
Source record: 125

On 2/26/2013 3:57 PM, Dave Platt wrote:
> In article <kgj54r$om5$1@dont-email.me>,
> Sal <salmonella@food poisoning.org> wrote:
>
>> RELATED: If you know, why do some yagis designs place the first director
>> quite a bit closer to the DE than the rest of the directors' spacing? In
>> other yagi designs, the spacing of the directors is relatively consistent,
>> where DE-to-first-director is about equal to the spacing of the remaining
>> directors. I haven't seen that difference explained ... yet. Thanks.
>
> You might be looking at what has become known as an "optimized
> wide-band" Yagi.
>
> According to one article (http://www.naic.edu/~angel/kp4ao/ham/owa.html)
> placing the first-director parasitic element very close to the
> driven element, causes the antenna to be behave as if the driven
> element's diameter is much larger than it is (approximating the
> distance between the DE and the first director).
>
> This has two useful effects: it increases the radiation resistance
> (making the Yagi easier to match to the feedline) and increases the
> bandwidth. You give up a small amount of forward gain, but this is
> said to be modest and to be a worthwhile price to pay for the ease of
> feeding (even a direct 50-ohm feed can be used in some cases) and the
> increased bandwidth.
>

Some of us old time EME/weak_signal builders call the first 4 elements
the K1FO launcher.

I did a lot of optimization over the last 25 years, but I didn't change
the first 4 elements of his design much. He got it right and it worked
especially well with a T match.

tom
K0TAR

203. Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-28 03:07:51 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kgmhkd$rq3$1@dont-email.me>
Source record: 126
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I am working on a simulation for a loop antenna in LTspice and I can't figure out why the signal strength features are what they are. The model uses a pair of loosely coupled inductors to model the transmitter and antenna loop with a separate pair of tightly coupled inductors to model the coupling transformer. A cap on the primary circuit is the tuning cap and a cap on the secondary is parasitic effects of the circuit board leading to the inputs on the IC.

There is a resonance near the frequency I would expect, but it is not so close actually. I can't figure why it is about 5% off. There is a second resonance fairly high up that I can't figure at all. None of the component values seem to combine appropriately to produce this peak. When looking at the tuning capacitor voltage there is an anti-resonance that is exactly at the frequency corresponding to the secondary resonance with the transformer and the parasitic capacitance. That makes sense to me, but it is pretty much the only part that jibes with what I can figure out.

I have uploaded a zip file with the schematic and a measurement file.

http://arius.com/temp/Antenna_trans_LTspice.zip

--

Rick

204. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-28 04:40:57 UTC
From: Tim Williams <tmoranwms@charter.net>
Message-ID: <kgmn2i$da8$1@dont-email.me>
Source record: 127
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I expect if you reflect the CT secondary stuff (don't forget Lsec) back to the primary, your answer will appear. Offhand I can't reason out which sum of L and C makes the resonance, but it's a four pole series-parallel resonant circuit, analysis should lay it bare.

Tim

--
Deep Friar: a very philosophical monk.
Website: http://seventransistorlabs.com

"rickman" <gnuarm@gmail.com> wrote in message
news:kgmhkd$rq3$1@dont-email.me...
>I am working on a simulation for a loop antenna in LTspice and I can't
>figure out why the signal strength features are what they are. The model
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>the coupling transformer. A cap on the primary circuit is the tuning cap
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> There is a resonance near the frequency I would expect, but it is not so
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>
> --
>
> Rick

205. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-28 23:11:11 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kgoo4e$ts5$1@dont-email.me>
Source record: 128
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 2/27/2013 11:40 PM, Tim Williams wrote:
> I expect if you reflect the CT secondary stuff (don't forget Lsec) back to
> the primary, your answer will appear. Offhand I can't reason out which
> sum of L and C makes the resonance, but it's a four pole series-parallel
> resonant circuit, analysis should lay it bare.

Are you sure about this? When you say to reflect the secondary back to
the primary that means the primary inductance would be doubled? I
believe the coupling of the two coils means they are one and the same
for the purposes of the circuit analysis, no?

You can't reason which sum of L and C makes the resonance and I can't
either. The calculation is off by about 5% and I can't explain that. I
can explain a null at about 290 kHz. That is the resonance of the
secondary with the secondary capacitance. I can't explain the other
peak at 363 kHz at all. A higher frequency would imply a smaller L
and/or C. How do you combine them to produce that? Consider the two
caps to be in series???

--

Rick

206. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-02-28 23:40:06 UTC
From: Tim Williams <tmoranwms@charter.net>
Message-ID: <kgopqd$5lu$1@dont-email.me>
Source record: 129
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"rickman" <gnuarm@gmail.com> wrote in message
news:kgoo4e$ts5$1@dont-email.me...
> A higher frequency would imply a smaller L and/or C. How do you combine
> them to produce that? Consider the two caps to be in series???

Sure. If you bring the 10p over to the primary, it looks like 10p * (30m / 5u), or whatever the ratio was (I don't have it in front of me now), in parallel with the primary. (I misspoke earlier, you can safely ignore Ls, because k = 1. There's no flux which is not common to both windings.)

Inductors effectively in parallel also increase the expected resonant frequency. If you have this,

```
. L1
. +-----UUU--+------+------+
. | + | | |
. ( Vsrc ) === C > R 3 L2
. | - | > 3
. | | | |
. +----------+------+------+
. _|_ GND
```

You might expect the resonant frequency is L2 + C, but it's actually (L1 || L2) = Leq. If L1 is not substantially larger than L2, the resonant frequency will be pulled higher.

Incidentally, don't forget to include loss components. I didn't see any explict R on the schematic. I didn't check if you set the LTSpice default parasitic ESR (cap), or DCR or EPR (coil) on the components. Besides parasitic losses, your signal is going *somewhere*, and that "where" consumes power!

The actual transmitter is most certainly not a perfect current source inductor, nor is the receiver lossless. This simulation has no expression for radiation in any direction that's not directly between the two antennas: if all the power transmitted by the current source is reflected back, even though it's through a 0.1% coupling coefficient, it has to go somewhere. If it's coming back out the antenna, and it's not being burned in the "transformer", it's coming back into the transmitter. This is at odds with reality, where a 100% reflective antenna doesn't magically smoke a distant transmitter, it simply reflects 99.9% back into space. The transmitter hardly knows.

In this example, if you set R very large, you'll see ever more voltage on the output, and ever more current draw from Vsrc. You can mitigate this

by increasing L1 still further, but the point is, if the source and load (R) aren't matched in some fashion, the power will reflect back to the transmitter and cause problems (in this case, power reflected back in-phase causes excessive current draw; in the CCS case, reflected power in-phase causes minimal voltage generation and little power transmission).

Power is always coming and going somewhere, and if you happen to forget this fact, it'll reflect back and zap you in the butt sooner or later!

Tim

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Deep Friar: a very philosophical monk.
Website: http://seventransistorlabs.com

207. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-01 13:47:34 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1362145654@panix.com>
Source record: 130
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted quarterly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

208. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-01 16:43:59 UTC
From: legg <legg@nospam.magma.ca>
Message-ID: <6tl1j8dno98p73qikmfqmvhlco12699u5m@4ax.com>
Source record: 131
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Wed, 27 Feb 2013 22:07:51 -0500, rickman <gnuarm@gmail.com> wrote:

<snip>
>There is a resonance near the frequency I would expect, but it is not so
>close actually. I can't figure why it is about 5% off. There is a
>second resonance fairly high up that I can't figure at all. None of the
>component values seem to combine appropriately to produce this peak.
<snip>

Pulling out the old reactance paper, there are a couple of expected
interactions using the values present:

Around 50KHz (89.42uH+48uH) with 50.42nF (L3+L1) with C1
Around 290KHz (89.42uH+48uH) with 6.25nF (L3+L1) with C2*N^2
Around 360KHz 48uH with 6.25nF L1 with C2*N^2
nL1/nL2=N=25

The mid-resonance is a dip or rejection.

What's the issue?

RL

209. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-01 17:39:07 UTC
From: Tim Wescott <tim@seemywebsite.com>
Message-ID: <RdSdnf4Xl-8meq3MnZ2dnUVZ5qKdnZ2d@giganews.com>
Source record: 132
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Wed, 27 Feb 2013 22:07:51 -0500, rickman wrote:

> I am working on a simulation for a loop antenna in LTspice and I can't
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> and antenna loop with a separate pair of tightly coupled inductors to
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> tuning cap and a cap on the secondary is parasitic effects of the
> circuit board leading to the inputs on the IC.
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> There is a resonance near the frequency I would expect, but it is not so
> close actually. I can't figure why it is about 5% off. There is a
> second resonance fairly high up that I can't figure at all. None of the
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> When looking at the tuning capacitor voltage there is an anti-resonance
> that is exactly at the frequency corresponding to the secondary
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> what I can figure out.
>
> I have uploaded a zip file with the schematic and a measurement file.
>
> http://arius.com/temp/Antenna_trans_LTspice.zip

Re-read what Tim Williams said.

A way to translate what he's saying into your simulation is to include the radiation resistance of the antenna into your simulation, and reduce the coupling -- 1e-6 is probably good enough. I am, frankly, not sure where this is best put in your radiation resistance, but just increasing the series resistance on L3 is probably sufficient; putting it in as a parallel resistance in L3 is probably more accurate, but would be more useful as a way of separating the radiation resistance effect from the winding resistance of L3 (which is, I assume, where your figure comes from).

Do you have the ability to measure the Q of your antenna as built, and compare it to the Q calculated from the known L, C, and winding resistance? That should give you a good estimate of the radiation resistance, or at least radiation resistance + other losses.

--
My liberal friends think I'm a conservative kook.
My conservative friends think I'm a liberal kook.
Why am I not happy that they have found common ground?

Tim Wescott, Communications, Control, Circuits & Software
http://www.wescottdesign.com

210. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-01 19:04:32 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kgr44f$5lr$7@dont-email.me>
Source record: 133
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 2/28/2013 6:40 PM, Tim Williams wrote:
> "rickman"<gnuarm@gmail.com> wrote in message
> news:kgoo4e$ts5$1@dont-email.me...
>> A higher frequency would imply a smaller L and/or C. How do you combine
>> them to produce that? Consider the two caps to be in series???
>
> Sure. If you bring the 10p over to the primary, it looks like 10p * (30m
> / 5u), or whatever the ratio was (I don't have it in front of me now), in
> parallel with the primary. (I misspoke earlier, you can safely ignore Ls,
> because k = 1. There's no flux which is not common to both windings.)

Reflecting the capacitance through the transformer changes it by the square of the turns ratio assuming the coupling coefficient is sufficiently high. I am simulating K at 1.

This is also true for the inductance, but in the opposite manner. So going from the 25 turn side to the 1 turn side, the effective capacitance is multiplied by 625 and the effective inductance (or resistance) is divided by 625. In fact, in LTspice you indicate the turns ratio by setting the inductance of the two coils by this ratio.

I see now that the reflected secondary capacitance is in parallel with the primary, rather than in parallel with the primary capacitor. That explains a lot... I'll have to hit the books to see how to calculate this new arrangement. I found a very similar circuit in the Radiotron Designer's Handbook. In section 4.6(iv)E on page 152 they show a series-parallel combination that only differs in the placement of the resistance in the parallel circuit. It need to be placed inline with the inductor... or is placing it parallel correct since this is the reflected resistance of the secondary? I'll have to cogitate on that a bit. I'm thinking it would be properly placed inline with the capacitor in the reflection since it is essentially inline in the secondary. Either way I expect it will have little impact on the resonant frequency and I can just toss all the resistances simplifying the math.

I do see one thing immediately. The null in Vcap I see is explained by the parallel resonance of the secondary cap with the secondary inductor. If you reflect that cap back to the primary in parallel with the primary inductor (resonating at the same frequency) it explains the null in the capacitor C1 voltage I see. C2' (reflected) and L1 make a parallel resonance with a high impedance dropping the primary cap current and voltage to a null. This null is calculated accurately.

What I need to do is change the impedance equation from Radiotron to one indicating the voltage at Vout relative to the input signal. I think I

can do that by treating the circuit as a voltage divider taking the ratio of the impedance at the input versus the impedance at the primary coil. No?

> Inductors effectively in parallel also increase the expected resonant
> frequency. If you have this,
>
> . L1
> . +-----UUU--+------+------+
> . | + | | |
> . (Vsrc) === C > R 3 L2
> . | - | > 3
> . | | | |
> . +----------+------+------+
> . _|_ GND
>
> You might expect the resonant frequency is L2 + C, but it's actually (L1
> || L2) = Leq. If L1 is not substantially larger than L2, the resonant
> frequency will be pulled higher.

I see, L1 and L2 are in parallel because the impedance of Vsrc is very low. That is not the circuit I am simulating however. The loop of the antenna and the loop of the inductor are in series along with the primary capacitor. I'm not sure what the resistor is intended to represent, perhaps transformer losses? The resistance of L1 was added to the simulation model along with the resistance of the secondary coil which you have not shown... I think. It seems to me you have left out the tuning capacitor on the primary.

> Incidentally, don't forget to include loss components. I didn't see any
> explict R on the schematic. I didn't check if you set the LTSpice default
> parasitic ESR (cap), or DCR or EPR (coil) on the components. Besides
> parasitic losses, your signal is going *somewhere*, and that "where"
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> in the "transformer", it's coming back into the transmitter. This is at
> odds with reality, where a 100% reflective antenna doesn't magically smoke
> a distant transmitter, it simply reflects 99.9% back into space. The
> transmitter hardly knows.

Interesting point. My primary goal with this is to simulate the resonance of the tuning so I can understand how to best tune the circuit. In many of the simulations I run the Q ends up being high enough that a very small drift in the parasitic capacitance on the secondary detunes the antenna and drops the signal level. It sounds

like there are other losses that will bring the Q much lower.

I would also like to have some idea of the signal strength to expect. My understanding is that the radiation resistance of loop antennas is pretty low. So not much energy will be radiated out. No?

You make it sound as if in the simulation, even with a small coupling coefficient all the energy from antenna inductor will still couple back into the transmitter inductor regardless of the K value. Do I misunderstand you? It seems to result in the opposite, minimizing this back coupling. Or are you saying that the simulation needs to simulate the radiation resistance to show radiated losses?

> In this example, if you set R very large, you'll see ever more voltage on
> the output, and ever more current draw from Vsrc. You can mitigate this
> by increasing L1 still further, but the point is, if the source and load
> (R) aren't matched in some fashion, the power will reflect back to the
> transmitter and cause problems (in this case, power reflected back
> in-phase causes excessive current draw; in the CCS case, reflected power
> in-phase causes minimal voltage generation and little power transmission).
>
> Power is always coming and going somewhere, and if you happen to forget
> this fact, it'll reflect back and zap you in the butt sooner or later!
>
> Tim

Actually, my goal was to build the receiver and I realized that my design would require the largest signal I could get from the antenna. I never realized I would end up having to learn quite so much about antenna design.

I've been planning to create a PCB with lots of options so I can test a number of configurations. Nothing about the simulation makes me doubt the utility of this idea.

One thing that continues to bug me is that nothing I have seen gives me a hint on how to factor in the distributed capacitance of the antenna shield. I am using RG6 with 16 pF/Ft and likely will end up with 100 foot of coax total. At some point I'll just have to make some measurements and see what the real world does.

--

Rick

211. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-02 01:53:07 UTC
From: Tim Williams <tmoranwms@charter.net>
Message-ID: <kgrlvprgk1@dont-email.me>
Source record: 134
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

You'll be much better off simply using the conventional radio approach than trying to simulate everything, especially when circuit equivalents are nebulous like this.

After all, if you can't quite tell what it *should* look like, how would you know if you could implement your model once you've found a satisfactory result?

What kind of antenna are you looking at, loop? The first thing to know about a loop is, if it's a very small loop (I'm guessing, at this frequency, it is), its radiation resistance is very low, meaning, you can treat it as a nearly pure inductance (Q > 10 I think is typical), and its bandwidth (even with a matched load) will be correspondingly narrow.

The nature of the incoming signal could be modeled as a voltage or current source; how doesn't really matter, because it isn't really either, it's a power source that couples in. Again, you don't have voltage without current and vice versa, it's all about power flow, and the matching that allows the power to flow.

Since the loop is inductive, your first priority is to resonate it with a capacitor at the desired frequency. This will require a very precise value, and even for a single frequency, may require a variable capacitor to account for manufacturing tolerances. In the AM BCB, a Q of 10 gets you 50-160kHz bandwidth, so you only get a few channels for any given tuning position. And if the Q is higher, you get even fewer.

Now that you've got a high Q resonant tank, you can do two things: couple into the voltage across the capacitor, or the current through the inductor. You need only a small fraction of either, because the Q is still going to be large. This can be arranged with a voltage divider (usually the capacitor is split into a huge hunk and a small variable part, e.g., 300pF variable + 10nF, output from across the 10nF), a transformer (a potential transformer across the cap, or a current transformer in series with the inductor), an inductive pickup (the big loop carries lots of volts, but you only need a few, so a much smaller loop can be placed inside the big loop), an impractically large inductor (like in my example circuit, which models radiation resistance as a parallel equivalent), etc. Whatever the case, you need to match transmission line impedance (e.g., 50 ohms) to radiation resistance (whichever series or parallel equivalent you have).

Once you get the signal into a transmission line, with a reasonable match (Z ~= Z_line, or alternately, SWR ~= 1), you can do whatever you want with it. Put it into an amplifier (don't forget to match it, too), etc. Yes,

you're going to have funny behavior at other frequencies, and if you're concerned about those frequencies, you'll have to choose the coupling circuit and adjustable (or selectable) components accordingly. But for the most part, you completely ignore any frequency that you aren't tuning for, usually enforcing that concept by inserting filters to reject any stragglers.

Example: suppose you have a loop of 5uH and need to tune it to 500kHz. It has a reactance of 15.7 ohms. Suppose further it has Q = 20. The ESR (not counting DCR and skin effect) is X_L / Q, or 0.78 ohms; alternately, the EPR is X_L * Q, or 314 ohms. The capacitor required is 20.3nF. If we use a current transformer to match to a 50 ohm line, it needs an impedance ratio of 1:64, or a turns ratio of 1:8. If we use a voltage transformer, it's of course 8:1. (A capacitor divider is unsuitable for resonant impedances less than line impedance, since it can only divide the impedance down. If the inductance were a lot larger, it could be used.) To a rough approximation, a smaller inductive loop, of 1/8 diameter of the larger, I think, would also work.

Tim

--
Deep Friar: a very philosophical monk.
Website: http://seventransistorlabs.com

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>> . _|_ GND
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>> consumes power!
>>
>> The actual transmitter is most certainly not a perfect current source
>> inductor, nor is the receiver lossless. This simulation has no
>> expression
>> for radiation in any direction that's not directly between the two
>> antennas: if all the power transmitted by the current source is
>> reflected
>> back, even though it's through a 0.1% coupling coefficient, it has to
>> go
>> somewhere. If it's coming back out the antenna, and it's not being
>> burned
>> in the "transformer", it's coming back into the transmitter. This is
>> at
>> odds with reality, where a 100% reflective antenna doesn't magically
>> smoke
>> a distant transmitter, it simply reflects 99.9% back into space. The
>> transmitter hardly knows.
>
> Interesting point. My primary goal with this is to simulate the
> resonance of the tuning so I can understand how to best tune the
> circuit. In many of the simulations I run the Q ends up being high
> enough that a very small drift in the parasitic capacitance on the
> secondary detunes the antenna and drops the signal level. It sounds
> like there are other losses that will bring the Q much lower.
>
> I would also like to have some idea of the signal strength to expect. My
> understanding is that the radiation resistance of loop antennas is
> pretty low. So not much energy will be radiated out. No?
>
> You make it sound as if in the simulation, even with a small coupling
> coefficient all the energy from antenna inductor will still couple back
> into the transmitter inductor regardless of the K value. Do I
> misunderstand you? It seems to result in the opposite, minimizing this
> back coupling. Or are you saying that the simulation needs to simulate
> the radiation resistance to show radiated losses?
>

>
>> In this example, if you set R very large, you'll see ever more voltage
>> on
>> the output, and ever more current draw from Vsrc. You can mitigate
>> this
>> by increasing L1 still further, but the point is, if the source and
>> load
>> (R) aren't matched in some fashion, the power will reflect back to the
>> transmitter and cause problems (in this case, power reflected back
>> in-phase causes excessive current draw; in the CCS case, reflected
>> power
>> in-phase causes minimal voltage generation and little power
>> transmission).
>>
>> Power is always coming and going somewhere, and if you happen to forget
>> this fact, it'll reflect back and zap you in the butt sooner or later!
>>
>> Tim
>
> Actually, my goal was to build the receiver and I realized that my
> design would require the largest signal I could get from the antenna. I
> never realized I would end up having to learn quite so much about
> antenna design.
>
> I've been planning to create a PCB with lots of options so I can test a
> number of configurations. Nothing about the simulation makes me doubt
> the utility of this idea.
>
> One thing that continues to bug me is that nothing I have seen gives me
> a hint on how to factor in the distributed capacitance of the antenna
> shield. I am using RG6 with 16 pF/Ft and likely will end up with 100
> foot of coax total. At some point I'll just have to make some
> measurements and see what the real world does.
>
> --
>
> Rick

212. Re: WWCR is Owned by Jewish Homosexuals

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-02 14:59:55 UTC
From: drahcir <sgsd@sgscc.com>
Message-ID: <is44j8h3nnoajrr3lii84svktkc0e55nc2@4ax.com>
Source record: 135
Cross-posted to: alt.slack,rec.radio.shortwave,soc.culture.jewish,soc.culture.israel,rec.radio.amateur.antenna

hey IDIOT, the last time you posted something about Jewish ownership,
with Monsanto, I proved you wrong and you fled like a little girl. Now
you're trying again. All this for one simple reason - you're a loser,
and the Jews you know are winners and you can't handle that.

On Mon, 17 Dec 2012 16:32:41 -0800 (PST), Michael JONES
<edlabounte@gmail.com> wrote:

>WWCR, so-called "Worldwide Christian radio", is owned by jewish
>homosexuals. Don't be deceived by these slime bags. The company that
>owns WWCR calls itself (for some reason) "F.W. Robberts Broadcasting
>Co. Inc.". They are located at 2730 Loumor Ave., Metairie, LA, 70001.
>Their phone number is (504) 831-6941, and Fax (504) 832-4039. The
>company is owned by Fred P. Westenberger (jew), Chris P. Westenberger
>(jew), Fritz N. Westenberger (jewish homosexual), and a couple other
>Westenbergers.
>
>Now just why on earth would a bunch of jewish homosexuals run a
>supposedly CHRISTIAN radio station? Do you many Christians that run
>jewish or homosexual radio stations?
>
>Here's a NY Times article about the very nice house that Fritz N.
>Westenberger and his "partner" Patrick live in. They often entertain
>many of their jewish homosexual "friends" at this house:
>
>http://www.nytimes.com/2011/07/29/realestate/house-tour-olive-ny.html?_r=0
>
>This very nice home was built with the money that you sent to WWCR to
>buy the shyster jew products they sell on that station, for example
>products sold by the Jew named Alex Jones. The jewish homosexuals who
>run WWCR really promote Alex Jones a lot. I wonder why?
>
>The entire purpose of WWCR is to push Israeli disinformation to cover
>up the criminal activity of the jewish crime network. That is Alex
>Jones' sole purpose for existing and being promoted by other jewish
>homosexual media outlets, such as Disney/ABC, etc.)
>
>DO NOT SPEND ONE PENNY OF MONEY ON THE SHYSTER FREEMASON JEW CRAP
>PRODUCTS THESE HUCKSTER CRIMINALS ARE PEDDLING.
>Understand that the sole reason these jews run a supposedly Christian
>station is TO DECEIVE YOU, about the crimes being committed by jews,
>such as the 9-11 attacks, that were the work of Israel, and to GATHER
>INFORMATION, ADDRESSES AND PHONE NUMBERS OF PEOPLE WHO ARE AWARE OF
>AND OBJECT TO THE JEWISH CRIME NETWORK.

>
>Spread the word: WWCR is owned by jewish homosexuals. Boycott them,
>and bankrupt every single shyster that broadcasts on that station,
>and
>let's get jewish homosexual criminal trash OUT OF NORTH AMERICA AND
>EUROPE, BY ANY MEANS NECESSARY.
>
>http://israeldid911.com

213. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-04 05:43:28 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kh1c8grtf1@dont-email.me>
Source record: 136
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/1/2013 11:43 AM, legg wrote:
> On Wed, 27 Feb 2013 22:07:51 -0500, rickman<gnuarm@gmail.com> wrote:
>
> <snip>
>> There is a resonance near the frequency I would expect, but it is not so
>> close actually. I can't figure why it is about 5% off. There is a
>> second resonance fairly high up that I can't figure at all. None of the
>> component values seem to combine appropriately to produce this peak.
> <snip>
>
> Pulling out the old reactance paper, there are a couple of expected
> interactions using the values present:
>
> Around 50KHz (89.42uH+48uH) with 50.42nF (L3+L1) with C1
> Around 290KHz (89.42uH+48uH) with 6.25nF (L3+L1) with C2*N^2
> Around 360KHz 48uH with 6.25nF L1 with C2*N^2
> nL1/nL2=N=25
>
> The mid-resonance is a dip or rejection.
>
> What's the issue?

290 kHz matches the calculations you just gave. But 290 kHz is the null
(or dip as you call it) from C2 and L2 (or L1 and C2 reflected with N^2).

I thought I wasn't getting the 60 kHz resonance, but I was mistakenly
adding the two capacitances together. So that is closer. Using L3+L1
with C1 I get 60.46 kHz while it is measured at 60 dead on in
simulation. That's nearly a 1% error.

I solved the equations finally. I found some info on the impedance of
series and parallel circuits. With that info I wrote the equation for
the ratio of Vout/Vin and found the roots. Turns out it is not so bad.
The equation is a fourth order, but it has no x^3 or x^1 terms and so
is actually a quadratic of x^2. Solving the quadratic gives the exact
figures for 60 kHz and 393 kHz peaks. Since this is from taking the
square root of x^2, there are also solutions at the negative values... duh!

Reflecting C2 through the transformer to create C2', the two nulls I
found can be calculated by the resonance of L1 and C2' (290 kHz null on
C1) or L1 with C1 and C2' (96500 Hz null on L3).

--

Rick

214. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-04 12:30:13 UTC
From: W5DXP <w5dxp@hotmail.com>
Message-ID: <5d69f445-c8cd-4077-977f-dcd57b33e3a6@googlegroups.com>
Source record: 137

I don't know much about LTspice. Does it use the lumped-circuit model or distributed network model?
--
73, Cecil, w5dxp.com

215. The Dallas Files

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-04 22:31:26 UTC
From: amdx <amdx@knology.net>
Message-ID: <3ad5b$513520c4$18d66b6a$26441@KNOLOGY.NET>
Source record: 138

Anyone know what happened to the yahoo group called thedallasfiles?
Sure wish I would have downloaded all the pdf files.

Mikek

216. Re: The Dallas Files

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-05 14:31:45 UTC
From: Channel Jumper <Channel.Jumper.b7bdd18@radiobanter.com>
Message-ID: <Channel.Jumper.b7bdd18@radiobanter.com>
Source record: 139

amdx;802332 Wrote:
> Anyone know what happened to the yahoo group called thedallasfiles?
> Sure wish I would have downloaded all the pdf files.
>
> Mikek
Maybe they don't want to play with you anymore?

What does this have to do with Antenna's?

--
Channel Jumper

217. Re: The Dallas Files

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-05 18:12:30 UTC
From: amdx <amdx@knologynotthis.net>
Message-ID: <9df55$51363588$18ec6dd7$27517@KNOLOGY.NET>
Source record: 140

On 3/5/2013 8:31 AM, Channel Jumper wrote:
> amdx;802332 Wrote:
>> Anyone know what happened to the yahoo group called thedallasfiles?
>> Sure wish I would have downloaded all the pdf files.
>>
>> Mikek
> Maybe they don't want to play with you anymore?
>
> What does this have to do with Antenna's?
>
>
>
>

It was all about antennas. (Mostly AMBCB antennas, but some LW and SW,
also amps for the same) Was a great Great Resource!

They is a he, and I won't take it personal because it seems he's not
playing with anybody, at least for now.

It was a yahoo group, message says;

Group Not Found

There is no group called thedallasfiles. Please make sure you typed the
web address correctly. If you have done so, the group may no longer exist.

Thanks Mikek

218. Re: The Dallas Files

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 06:48:45 UTC
From: Sal <salmonella@food>
Message-ID: <kh6oq0qkr1@dont-email.me>
Source record: 141

"amdx" <amdx@knologynotthis.net> wrote in message
news:9df55$51363588$18ec6dd7$27517@KNOLOGY.NET...
> On 3/5/2013 8:31 AM, Channel Jumper wrote:
>> amdx;802332 Wrote:
>>> Anyone know what happened to the yahoo group called thedallasfiles?
>>> Sure wish I would have downloaded all the pdf files.

> It was all about antennas. (Mostly AMBCB antennas, but some LW and SW,
> also amps for the same) Was a great Great Resource!
>
> They is a he, and I won't take it personal because it seems he's not
> playing with anybody, at least for now.
>
> It was a yahoo group, message says;
>
> Group Not Found
>
> There is no group called thedallasfiles. Please make sure you typed the
> web address correctly. If you have done so, the group may no longer exist.

;

Dallas Lankford was listed on the Louisiana Tech faculty about ten years ago
this way:

Lankford, Dallas S., IV; Professor, Mathematics and Statistics - BA and MA,
PhD, Univ. of Texas (1978) Graduate Faculty

He has published numerous technical papers but I saw none dated after 2010.
An Internet search will uncover articles wherein the author credits him with
assistance in the production of the article. I looked for an obituary and
found only the report of his father's death in 1993. He may have retired
and folded everything. He controlled access to the Yahoo Group tightly,
stating that he had a method he used to determine who would be granted
access and who would not. With that in mind, consider that he may not want
any further dissemination of his work.

He is known among our people for his effective procedures for receiving weak
signals. My brief experience with him showed him to be overly-sensitive and
controlling, as above. If you say something that he doesn't like, he'll
shut the door in your face. I made the mistake of suggesting something to
him. SLAM! It still hurts. I really wanted to study more of his work and
I think he knew it.

If I hear somebody offer an opinion that he is eccentric and cantankerous,
I'll offer no argument.

```
"Sal"
```

219. Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 10:08:54 UTC
From: Bob <not@real.com>
Message-ID: <c3ocj8d1c3j4bio0venlt9e78divahr7li@4ax.com>
Source record: 142

Like the subject asks, are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings? Time for new coax, so I wanted to get input from those who are familiar with both before buying either.

Thanks, and 73,
Bob KB2ZGN

220. Re: The Dallas Files

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 12:36:28 UTC
From: amdx <amdx@knologynotthis.net>
Message-ID: <8b3de$513737fd$18ec6dd7$20112@KNOLOGY.NET>
Source record: 143

On 3/6/2013 12:48 AM, Sal wrote:
> "amdx" <amdx@knologynotthis.net> wrote in message
> news:9df55$51363588$18ec6dd7$27517@KNOLOGY.NET...
>> On 3/5/2013 8:31 AM, Channel Jumper wrote:
>>> amdx;802332 Wrote:
>>>> Anyone know what happened to the yahoo group called thedallasfiles?
>>>> Sure wish I would have downloaded all the pdf files.
>
>> It was all about antennas. (Mostly AMBCB antennas, but some LW and SW,
>> also amps for the same) Was a great Great Resource!
>>
>> They is a he, and I won't take it personal because it seems he's not
>> playing with anybody, at least for now.
>>
>> It was a yahoo group, message says;
>>
>> Group Not Found
>>
>> There is no group called thedallasfiles. Please make sure you typed the
>> web address correctly. If you have done so, the group may no longer exist.
>
> ;
>
> Dallas Lankford was listed on the Louisiana Tech faculty about ten years ago
> this way:
>
> Lankford, Dallas S., IV; Professor, Mathematics and Statistics - BA and MA,
> PhD, Univ. of Texas (1978) Graduate Faculty
>
> He has published numerous technical papers but I saw none dated after 2010.
> An Internet search will uncover articles wherein the author credits him with
> assistance in the production of the article. I looked for an obituary and
> found only the report of his father's death in 1993. He may have retired
> and folded everything. He controlled access to the Yahoo Group tightly,
> stating that he had a method he used to determine who would be granted
> access and who would not. With that in mind, consider that he may not want
> any further dissemination of his work.
>
> He is known among our people for his effective procedures for receiving weak
> signals. My brief experience with him showed him to be overly-sensitive and
> controlling, as above. If you say something that he doesn't like, he'll
> shut the door in your face. I made the mistake of suggesting something to
> him. SLAM! It still hurts. I really wanted to study more of his work and
> I think he knew it.

>
> If I hear somebody offer an opinion that he is eccentric and cantankerous,
> I'll offer no argument.
>
> "Sal"
>
>
Sal,
Send me a private email.
Remove >notthis< from my email above.
Thanks, Mikek

221. Re: Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 13:33:11 UTC
From: Channel Jumper <Channel.Jumper.b7d2e98@radiobanter.com>
Message-ID: <Channel.Jumper.b7d2e98@radiobanter.com>
Source record: 145

'Bob[_32_ Wrote:
> ;802371']Like the subject asks, are the "generic" versions of LMR-400
> and LMR-400
> Ultraflex as good as the "name brand" or is it not worth the savings?
> Time for
> new coax, so I wanted to get input from those who are familiar with both
> before
> buying either.
>
> Thanks, and 73,
> Bob KB2ZGN

Hello Bob,
You asked a good question, but you are not going to like the answer.
Good and cheap does not walk hand in hand.

The reason why the established companies are head and shoulders above
the generic equivelent is because the established companies has a much
higher quality standard.

LMR 400 is a two edge sword.
Yes it is good, but it is also slightly more cost and a lot less durable
then other types of cable.

The main use for LMR 400 is the higher ranges of UHF due to the fact
that it has a lower loss rate.

A few things to remember, its center conductor is 10 gauge / not 12.
Its shield is foil - braid, not copper conductor. Its dielectric is
foam not poly.

You have to buy special connectors, you aren't going to screw a PL
connector on it and you can't solder it.
You have to have crimp pliers - and the $2.50 or more PL connectors to
use it.

The foam dielectric is hygroscopic - it attracts water and it's life
span is maybe 10 years. You aren't going to put it up and walk away
and 30 years later still be using it - because once the water gets
inside of it, it is ruined.

The outer jacket is very fragile, if it gets a knick or gets damaged,
you are going to have to either splice it or replace it.

If your work involves UHF - your needs would be better off met with
Hardline then with LMR 400. There are radio towers out there with

hardline that is 40 years old that is still in service.

Often times, if you know the right person, they will sell you used hardline for a lot less money then new LMR 400.. After all, unless they are going to build a repeater - they probably don't have any use for it.

I hope this is not information over load.

When using generic LMR 400 - you want to make sure to have it sweep tested before you put it up. The Chinese aren't real particular what they sell, and most times the deal is that there is a bad spot somewhere in the coax and that is the reason why they wholesale it with no name on it.

--
Channel Jumper

222. Re: Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 15:21:35 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <ApGdnYpELLq1wqrMnZ2dnUVZ_radnZ2d@earthlink.com>
Source record: 144

"Bob" <not@real.com> wrote in message
news:c3ocj8d1c3j4bio0venlt9e78divahr7li@4ax.com...
> Like the subject asks, are the "generic" versions of LMR-400 and LMR-400
> Ultraflex as good as the "name brand" or is it not worth the savings? Time
> for
> new coax, so I wanted to get input from those who are familiar with both
> before
> buying either.
>
> Thanks, and 73,
> Bob KB2ZGN

Depends on what brands you are talking about being the 'generic' version. I
am using some of the Davis Buryflex that is similar to lmr400 ultra flex. I
like it very much and have ran the loss tests on it on 2 meters and 440 mhz
and it meets the specs. I have 4 runs of it to the beams on my tower
covering a tribander, 6, 2, and 440. They have been up about 5 years with
no noticable problems.

223. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 18:34:19 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kh825t$ls0$1@dont-email.me>
Source record: 146

On 3/4/2013 7:30 AM, W5DXP wrote:
> I don't know much about LTspice. Does it use the lumped-circuit model or distributed network model?
> --
> 73, Cecil, w5dxp.com

I'm not sure what aspect of modeling you are referring to. It is not an antenna simulator. LTspice simulates electrical circuits. I am using it to understand how the parasitic capacitance of my circuit affect the use of a transformer coupled input.

LTspice will model a distributed network if you create the appropriate circuit and model descriptions.

Is that what you mean?

--

Rick

224. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 19:00:57 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kh83nluqo1@dont-email.me>
Source record: 147
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/1/2013 8:53 PM, Tim Williams wrote:
> You'll be much better off simply using the conventional radio approach
> than trying to simulate everything, especially when circuit equivalents
> are nebulous like this.

I don't know what you mean by the "conventional radio approach".

> After all, if you can't quite tell what it *should* look like, how would
> you know if you could implement your model once you've found a
> satisfactory result?

I was simulating a specific circuit for a specific purpose. I got the
answer I was looking for.

> What kind of antenna are you looking at, loop? The first thing to know
> about a loop is, if it's a very small loop (I'm guessing, at this
> frequency, it is), its radiation resistance is very low, meaning, you can
> treat it as a nearly pure inductance (Q> 10 I think is typical), and its
> bandwidth (even with a matched load) will be correspondingly narrow.

Yes, I plan to use a shielded loop. I have found some contradictory
info on the effectiveness of the "shield". One reference seems to have
measurements that show it is primarily E-field coupled in the longer
distance portion of the near-field.

I am aware of the low radiation resistance and have not included that
factor in my simulation. The Q of just the antenna loop is around 100
as calculated from the ratio of reactance to resistance.

> The nature of the incoming signal could be modeled as a voltage or current
> source; how doesn't really matter, because it isn't really either, it's a
> power source that couples in. Again, you don't have voltage without
> current and vice versa, it's all about power flow, and the matching that
> allows the power to flow.

A friend in a loop antenna Yahoo group suggested the use of the
transformer coupling with a low k to model the signal reception.

> Since the loop is inductive, your first priority is to resonate it with a
> capacitor at the desired frequency. This will require a very precise
> value, and even for a single frequency, may require a variable capacitor
> to account for manufacturing tolerances. In the AM BCB, a Q of 10 gets
> you 50-160kHz bandwidth, so you only get a few channels for any given
> tuning position. And if the Q is higher, you get even fewer.

Yes, that is loop antenna 101 I think. It was when I added a coupling transformer with 100:1 turns ratio that I was told I needed to consider the parasitics. I have found it is not useful to go much above 25 or 33:1 on the turns ratio. I am receiving a single frequency, 60 kHz. There is no need for a wide bandwidth. Ultimately, I prefer a Q of > 100 for the higher gain. If it gets too high, the off tuning by variations (drift) in the parasitic capacitance affects the antenna gain appreciably.

> Now that you've got a high Q resonant tank, you can do two things: couple
> into the voltage across the capacitor, or the current through the
> inductor. You need only a small fraction of either, because the Q is
> still going to be large. This can be arranged with a voltage divider
> (usually the capacitor is split into a huge hunk and a small variable
> part, e.g., 300pF variable + 10nF, output from across the 10nF), a
> transformer (a potential transformer across the cap, or a current
> transformer in series with the inductor), an inductive pickup (the big
> loop carries lots of volts, but you only need a few, so a much smaller
> loop can be placed inside the big loop), an impractically large inductor
> (like in my example circuit, which models radiation resistance as a
> parallel equivalent), etc. Whatever the case, you need to match
> transmission line impedance (e.g., 50 ohms) to radiation resistance
> (whichever series or parallel equivalent you have).

Transmission line? What transmission line? The antenna is directly connected to the receiver which has a very high input impedance. Why do I need to consider radiation resistance? I have not read that anywhere.

> Once you get the signal into a transmission line, with a reasonable match
> (Z ~= Z_line, or alternately, SWR ~= 1), you can do whatever you want with
> it. Put it into an amplifier (don't forget to match it, too), etc. Yes,
> you're going to have funny behavior at other frequencies, and if you're
> concerned about those frequencies, you'll have to choose the coupling
> circuit and adjustable (or selectable) components accordingly. But for
> the most part, you completely ignore any frequency that you aren't tuning
> for, usually enforcing that concept by inserting filters to reject any
> stragglers.
>
> Example: suppose you have a loop of 5uH and need to tune it to 500kHz. It
> has a reactance of 15.7 ohms. Suppose further it has Q = 20. The ESR
> (not counting DCR and skin effect) is X_L / Q, or 0.78 ohms; alternately,
> the EPR is X_L * Q, or 314 ohms. The capacitor required is 20.3nF. If we
> use a current transformer to match to a 50 ohm line, it needs an impedance
> ratio of 1:64, or a turns ratio of 1:8. If we use a voltage transformer,
> it's of course 8:1. (A capacitor divider is unsuitable for resonant
> impedances less than line impedance, since it can only divide the
> impedance down. If the inductance were a lot larger, it could be used.)
> To a rough approximation, a smaller inductive loop, of 1/8 diameter of the
> larger, I think, would also work.

I'm not familiar with the concept of voltage transformer vs. current transformer. How do you mean that?

How did you get the 1:64 impedance ratio and the 1:8 turns ratio? I don't follow that. Are you saying the line impedance should match the ESR? Why exactly would it need to match the ESR?

--

Rick

225. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 19:58:46 UTC
From: W5DXP <w5dxp@hotmail.com>
Message-ID: <016f26cc-722f-4bec-b325-e71e5bdea612@googlegroups.com>
Source record: 148

On Wednesday, March 6, 2013 12:34:19 PM UTC-6, rickman wrote:
> LTspice will model a distributed network if you create the appropriate
> circuit and model descriptions. Is that what you mean?

A 75m bugcatcher loading coil is a non-negligible percentage of a wavelength long, e.g. 40 degrees at 4 MHz. Will LT spice give one the delay through a 75m bugcatcher loading coil?
--
73, Cecil, w5dxp.com

226. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 20:20:26 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kh88cn$s4r$1@dont-email.me>
Source record: 149

On 3/6/2013 2:58 PM, W5DXP wrote:
> On Wednesday, March 6, 2013 12:34:19 PM UTC-6, rickman wrote:
>> LTspice will model a distributed network if you create the appropriate
>> circuit and model descriptions. Is that what you mean?
>
> A 75m bugcatcher loading coil is a non-negligible percentage of a wavelength long, e.g. 40 degrees at 4 MHz. Will LT spice give one the delay through a 75m bugcatcher loading coil?
> --
> 73, Cecil, w5dxp.com

I don't know why not. If you can describe it in the appropriate terms of L, C and R in sufficient detail. They also have components that are transmission lines, one lossy and one lossless I believe. Would they help? I've never worked with them, but there is help available in a Yahoo group for LTspice. In fact, if you dig around in the group archives someone else may have done something very similar before. A good place to start would be a google search even.

Some parts of using LTspice can be a bear to learn. There are all sorts of online materials for getting started though. Some of the advanced stuff is not so well documented. I am happy to assist in any way I can. Ask me about .MEAS scripts for example.

--

Rick

227. Re: Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-06 21:35:54 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <3PSdnc--xJshK6rMnZ2dnUVZ_uGdnZ2d@earthlink.com>
Source record: 150

"Channel Jumper" <Channel.Jumper.b7d2e98@radiobanter.com> wrote in message
news:Channel.Jumper.b7d2e98@radiobanter.com...
>
> LMR 400 is a two edge sword.
> Yes it is good, but it is also slightly more cost and a lot less durable
> then other types of cable.
>
> The main use for LMR 400 is the higher ranges of UHF due to the fact
> that it has a lower loss rate.
>
> A few things to remember, its center conductor is 10 gauge / not 12.
> Its shield is foil - braid, not copper conductor. Its dielectric is
> foam not poly.
>
> You have to buy special connectors, you aren't going to screw a PL
> connector on it and you can't solder it.
> You have to have crimp pliers - and the $2.50 or more PL connectors to
> use it.

LMR400 has foil, but it also has about a 95% braided shield. It is as easy to solder to as any other rg8 type of coax with a braded shield. A standard PL259 fits it just fine. Atleast all the ones I have used do. If using some N type connectors the center pin needs to be specified as the lmr400/9913 type due to the larger center conductor.

The dielectric is fine also. It is no worse than any other coax. It is not like the origionaal 9913 coax that was a hollow tube that could fill with water. I had 2 runs of that up about 50 feet to the antennas and did not have a water problem in about 10 years. It was still dry when I took it down for a move.

Still not sure about what you are calling the 'generic' coax. There is some sold by TheWireMan with his brand. He does not make it, but buys it from another company. That seems to be as good as any other of the same type going on my sweeping two 100 foot rolls of the LMR 400 type and 100 feet of a coax of a differant type from him from about 30 to 1000 MHz. Same as the Davis Bury Flex. That Bury Flex is tougher to work with than some.

One indication the coax is not very good quality is if the braid is less than about 90%. The beter ones should be atleast 95%. Most of the loss in coax is in the center conductor and then the braid. That is up to around 1000 MHZ. But after that, most are not going to use coax anyway.

228. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 01:13:25 UTC
From: Tim Williams <tmoranwms@charter.net>
Message-ID: <kh8pgvnob1@dont-email.me>
Source record: 151
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"rickman" <gnuarm@gmail.com> wrote in message
news:kh83nluqo1@dont-email.me...
> Yes, I plan to use a shielded loop. I have found some contradictory
> info on the effectiveness of the "shield". One reference seems to have
> measurements that show it is primarily E-field coupled in the longer
> distance portion of the near-field.

I trust this resource:
http://vk1od.net/antenna/shieldedloop/
He's got gobs of analytical articles.

> Yes, that is loop antenna 101 I think. It was when I added a coupling
> transformer with 100:1 turns ratio that I was told I needed to consider
> the parasitics. I have found it is not useful to go much above 25 or
> 33:1 on the turns ratio. I am receiving a single frequency, 60 kHz.
> There is no need for a wide bandwidth. Ultimately, I prefer a Q of >
> 100 for the higher gain. If it gets too high, the off tuning by
> variations (drift) in the parasitic capacitance affects the antenna gain
> appreciably.

High Q isn't the goal, high radiation resistance is -- the bigger the
loop, the better it couples with free space, until it's a wave length
around.

You can go ahead and make a teeny coil out of polished silver litz wire,
and push the Q up into the hundreds, but all you'll see is internal
resistance, hardly anything attributable to actual radiation. Since the
losses dominate over radiation, it makes a crappy antenna. But you know
that from looking at it -- it's a tiny lump, of course it's not going to
see the outside world.

It is true, however, that a small coil, with low losses, will have low
noise. AM radios rely on this, which is how they get away with tiny hunks
of ferrite for picking up radio.

Of course, it doesn't hurt that AM stations are 50kW or so, to push over
atmospheric noise.

> Transmission line? What transmission line? The antenna is directly
> connected to the receiver which has a very high input impedance. Why do
> I need to consider radiation resistance? I have not read that
> anywhere.

Ok, then you can merge the matching transformer, transmission line and
receiver input transformer into one -- an even larger stepup into whatever
impedance it's looking at (what's "very high", kohms? Mohms?) will get you

that much more SNR.

> I'm not familiar with the concept of voltage transformer vs. current
> transformer. How do you mean that?

Current transformer measures current (its winding is in series), potential transformer measures voltage (in parallel).

> How did you get the 1:64 impedance ratio and the 1:8 turns ratio? I
> don't follow that. Are you saying the line impedance should match the
> ESR? Why exactly would it need to match the ESR?

ESR (and Q) measured on the coil corresponds to radiation resistance (series equivalent) *plus* internal losses (also series equivalent). You can't separate the two components, so you can only get the best power match by the good old impedance theorem.

~1:64 is 50 ohm / 0.78 ohm, and N2/N1 = sqrt(Z2/Z1), or 8:1 turns ratio.

Tim

--
Deep Friar: a very philosophical monk.
Website: http://seventransistorlabs.com

229. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 07:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1362639901@panix.com>
Source record: 152
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.2 2009/11/25 14:41:01
Posting-Frequency: posted quarterly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

One significant omission, requiring immediate updates, for this article |
is that it does not mention newer amateur radio newsgroups created since |
it was written, including: |

rec.radio.amateur.antenna |
rec.radio.amateur.boatanchors |
rec.radio.amateur.dx |
rec.radio.amateur.equipment |
rec.radio.amateur.homebrew |
rec.radio.amateur.moderated |
rec.radio.amateur.space |

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:
```

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.

230. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 07:15:40 UTC
From: Tauno Voipio <tauno.voipio@notused.fi.invalid>
Message-ID: <kh9eo7$691$1@dont-email.me>
Source record: 153
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 6.3.13 9:00 , rickman wrote:

>> Since the loop is inductive, your first priority is to resonate it with a
>> capacitor at the desired frequency. This will require a very precise
>> value, and even for a single frequency, may require a variable capacitor
>> to account for manufacturing tolerances. In the AM BCB, a Q of 10 gets
>> you 50-160kHz bandwidth, so you only get a few channels for any given
>> tuning position. And if the Q is higher, you get even fewer.
>
> Yes, that is loop antenna 101 I think. It was when I added a coupling
> transformer with 100:1 turns ratio that I was told I needed to consider
> the parasitics. I have found it is not useful to go much above 25 or
> 33:1 on the turns ratio. I am receiving a single frequency, 60 kHz.
> There is no need for a wide bandwidth. Ultimately, I prefer a Q of >
> 100 for the higher gain. If it gets too high, the off tuning by
> variations (drift) in the parasitic capacitance affects the antenna gain
> appreciably.

Please note that high Q will destroy the modulation sidebands on
the signal you're listening to.

In aviation, there are non-directional beacons which are transmitting
in a frequency around 300 kHz (1 km wavelength). The antennas cannot
obviously be of efficient length (250 m / 800 ft), so they are short
(20 m / 70 ft) force-tuned to the transmitting frequency. This creates
so high Q that the identification modulation sidebands for the customary
1050 Hz audio do not fit in, and the ID is modulated using 400 Hz audio.

--

Tauno Voipio, avionics engineer (also OH2UG)

231. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 14:30:58 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kha8a5$3db$1@dont-email.me>
Source record: 154
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/7/2013 2:15 AM, Tauno Voipio wrote:
> On 6.3.13 9:00 , rickman wrote:
>
>>> Since the loop is inductive, your first priority is to resonate it
>>> with a
>>> capacitor at the desired frequency. This will require a very precise
>>> value, and even for a single frequency, may require a variable capacitor
>>> to account for manufacturing tolerances. In the AM BCB, a Q of 10 gets
>>> you 50-160kHz bandwidth, so you only get a few channels for any given
>>> tuning position. And if the Q is higher, you get even fewer.
>>
>> Yes, that is loop antenna 101 I think. It was when I added a coupling
>> transformer with 100:1 turns ratio that I was told I needed to consider
>> the parasitics. I have found it is not useful to go much above 25 or
>> 33:1 on the turns ratio. I am receiving a single frequency, 60 kHz.
>> There is no need for a wide bandwidth. Ultimately, I prefer a Q of >
>> 100 for the higher gain. If it gets too high, the off tuning by
>> variations (drift) in the parasitic capacitance affects the antenna gain
>> appreciably.
>
> Please note that high Q will destroy the modulation sidebands on
> the signal you're listening to.

I appreciate the advice from everyone, but much of it is not in the
proper context and way off target. "High" Q is how high? Where are the
modulation sidebands? My point is that I have already considered this.
The modulation sidebands of this signal are on the order of low 10's
of Hz. This signal is modulated at a 1 bit per second rate. I will be
demodulating a 30 Hz sample rate. So a bandwidth of 100 Hz is plenty
which corresponds to a Q of around 500.

I said I was looking for a Q over 100, maybe I should have said a Q of a
bit over 100. By the time it gets to 300 it is to peaky to hold a tune
setting. That is the problem I am concerned with.

> In aviation, there are non-directional beacons which are transmitting
> in a frequency around 300 kHz (1 km wavelength). The antennas cannot
> obviously be of efficient length (250 m / 800 ft), so they are short
> (20 m / 70 ft) force-tuned to the transmitting frequency. This creates
> so high Q that the identification modulation sidebands for the customary
> 1050 Hz audio do not fit in, and the ID is modulated using 400 Hz audio.

Ok, but that is nothing like my application, receiving WWVB.

--

Rick

232. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 14:50:11 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kha9e1$9qt$1@dont-email.me>
Source record: 155
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/6/2013 8:13 PM, Tim Williams wrote:
> "rickman"<gnuarm@gmail.com> wrote in message
> news:kh83nluqo1@dont-email.me...
>> Yes, I plan to use a shielded loop. I have found some contradictory
>> info on the effectiveness of the "shield". One reference seems to have
>> measurements that show it is primarily E-field coupled in the longer
>> distance portion of the near-field.
>
> I trust this resource:
> http://vk1od.net/antenna/shieldedloop/
> He's got gobs of analytical articles.

Yes, I've seen this page. Thanks.

>> Yes, that is loop antenna 101 I think. It was when I added a coupling
>> transformer with 100:1 turns ratio that I was told I needed to consider
>> the parasitics. I have found it is not useful to go much above 25 or
>> 33:1 on the turns ratio. I am receiving a single frequency, 60 kHz.
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>> 100 for the higher gain. If it gets too high, the off tuning by
>> variations (drift) in the parasitic capacitance affects the antenna gain
>> appreciably.
>
> High Q isn't the goal, high radiation resistance is -- the bigger the
> loop, the better it couples with free space, until it's a wave length
> around.

I'm not clear on why you keep referring to radiation resistance for a receiving antenna. Does this result in a larger received signal? I am concerned with maximizing the voltage at the input to the receiver.

> You can go ahead and make a teeny coil out of polished silver litz wire,
> and push the Q up into the hundreds, but all you'll see is internal
> resistance, hardly anything attributable to actual radiation. Since the
> losses dominate over radiation, it makes a crappy antenna. But you know
> that from looking at it -- it's a tiny lump, of course it's not going to
> see the outside world.

I have no idea why you are talking about Litz wire and tiny coils. I never said I was looking to maximize the Q. I said I wanted a Q of over 100. I should have said, slightly over 100. A higher Q clearly does increase the voltage on the input in my simulations. Is there something wrong with my simulations?

> It is true, however, that a small coil, with low losses, will have low
> noise. AM radios rely on this, which is how they get away with tiny hunks
> of ferrite for picking up radio.
>
> Of course, it doesn't hurt that AM stations are 50kW or so, to push over
> atmospheric noise.
>
>> Transmission line? What transmission line? The antenna is directly
>> connected to the receiver which has a very high input impedance. Why do
>> I need to consider radiation resistance? I have not read that
>> anywhere.
>
> Ok, then you can merge the matching transformer, transmission line and
> receiver input transformer into one -- an even larger stepup into whatever
> impedance it's looking at (what's "very high", kohms? Mohms?) will get you
> that much more SNR.

Yes, a higher stepup ratio gets larger signal up to a point. That point is determined by the parasitic capacitance of the receiver input. That capacitance is reflected back through the transformer and affects the antenna tuning. In my simulations it creates a filter with two resonances.

>> I'm not familiar with the concept of voltage transformer vs. current
>> transformer. How do you mean that?
>
> Current transformer measures current (its winding is in series), potential
> transformer measures voltage (in parallel).

Series and parallel with what? I'm not following this. I have trouble with series and parallel resonance, but I'm starting to get the concept. Sometimes it is hard to tell how a circuit is being stimulated.

>> How did you get the 1:64 impedance ratio and the 1:8 turns ratio? I
>> don't follow that. Are you saying the line impedance should match the
>> ESR? Why exactly would it need to match the ESR?
>
> ESR (and Q) measured on the coil corresponds to radiation resistance
> (series equivalent) *plus* internal losses (also series equivalent). You
> can't separate the two components, so you can only get the best power
> match by the good old impedance theorem.

Internal losses of what? How do you determine the internal losses?

> ~1:64 is 50 ohm / 0.78 ohm, and N2/N1 = sqrt(Z2/Z1), or 8:1 turns ratio.

Ok, so you were matching the hypothetical ESR to the hypothetical line impedance.

--

Rick

233. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 17:55:21 UTC
From: Tauno Voipio <tauno.voipio@notused.fi.invalid>
Message-ID: <khak7jcfa1@dont-email.me>
Source record: 156
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 7.3.13 4:30 , rickman wrote:
> On 3/7/2013 2:15 AM, Tauno Voipio wrote:
>> On 6.3.13 9:00 , rickman wrote:
>>
>>>> Since the loop is inductive, your first priority is to resonate it
>>>> with a
>>>> capacitor at the desired frequency. This will require a very precise
>>>> value, and even for a single frequency, may require a variable
>>>> capacitor
>>>> to account for manufacturing tolerances. In the AM BCB, a Q of 10 gets
>>>> you 50-160kHz bandwidth, so you only get a few channels for any given
>>>> tuning position. And if the Q is higher, you get even fewer.
>>>
>>> Yes, that is loop antenna 101 I think. It was when I added a coupling
>>> transformer with 100:1 turns ratio that I was told I needed to consider
>>> the parasitics. I have found it is not useful to go much above 25 or
>>> 33:1 on the turns ratio. I am receiving a single frequency, 60 kHz.
>>> There is no need for a wide bandwidth. Ultimately, I prefer a Q of >
>>> 100 for the higher gain. If it gets too high, the off tuning by
>>> variations (drift) in the parasitic capacitance affects the antenna gain
>>> appreciably.
>>
>> Please note that high Q will destroy the modulation sidebands on
>> the signal you're listening to.
>
> I appreciate the advice from everyone, but much of it is not in the
> proper context and way off target. "High" Q is how high? Where are the
> modulation sidebands? My point is that I have already considered this.
> The modulation sidebands of this signal are on the order of low 10's
> of Hz. This signal is modulated at a 1 bit per second rate. I will be
> demodulating a 30 Hz sample rate. So a bandwidth of 100 Hz is plenty
> which corresponds to a Q of around 500.
>
> I said I was looking for a Q over 100, maybe I should have said a Q of a
> bit over 100. By the time it gets to 300 it is to peaky to hold a tune
> setting. That is the problem I am concerned with.
>
>
>> In aviation, there are non-directional beacons which are transmitting
>> in a frequency around 300 kHz (1 km wavelength). The antennas cannot
>> obviously be of efficient length (250 m / 800 ft), so they are short
>> (20 m / 70 ft) force-tuned to the transmitting frequency. This creates
>> so high Q that the identification modulation sidebands for the customary

>> 1050 Hz audio do not fit in, and the ID is modulated using 400 Hz audio.
>
> Ok, but that is nothing like my application, receiving WWVB.
>

I'd still be wary of high Q. The antenna is, by definition, in close interaction with its surroundings, and a high-Q thing is quickly detuned.

At those low frequencies, the atmospheric and other outside noise is far larger than the internal noise of an amplifier, so in my opinion, the way to go is a loop tuned to 60 kHz with as low Q as easily comes without extra attenuation and a good pre-amplifier. The preamp can then contain a tuned interstage tank for interference suppression.

--

Tauno Voipio

234. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 18:11:03 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khal6rhni1@dont-email.me>
Source record: 157
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/7/2013 12:55 PM, Tauno Voipio wrote:
> On 7.3.13 4:30 , rickman wrote:
>>
>> Ok, but that is nothing like my application, receiving WWVB.
>>
>
> I'd still be wary of high Q. The antenna is, by definition, in close
> interaction with its surroundings, and a high-Q thing is quickly
> detuned.
>
> At those low frequencies, the atmospheric and other outside noise is
> far larger than the internal noise of an amplifier, so in my opinion,
> the way to go is a loop tuned to 60 kHz with as low Q as easily comes
> without extra attenuation and a good pre-amplifier. The preamp can
> then contain a tuned interstage tank for interference suppression.

I understand. But this is intended to be *very* low power and I haven't found an amp I can use that is in the low double digits uW power consumption range. I plan to use no amp and go straight to digital.

--

Rick

235. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 19:39:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <e4qhj85s8tuj4ja3jrnfe0ldss62q6pfbu@4ax.com>
Source record: 158
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Thu, 07 Mar 2013 13:11:03 -0500, rickman <gnuarm@gmail.com> wrote:

>I understand. But this is intended to be *very* low power and I haven't
>found an amp I can use that is in the low double digits uW power
>consumption range. I plan to use no amp and go straight to digital.

I don't think that's possible. Unless your input A/D converter can
operate in the microvolt region, it's going to have a difficult time
dealing with the low signal levels. Fortunately, WWVB is on-off
keying with no amplitude component, so there's no incentive to add an
AGC controlled input amplifier in order to maximize the A/D converters
dynamic range. Still, you need to work with something more than a few
bits above the noise level. Incidentally, after midnight, you WWVB
delivers about 100 uV/meter or more to continental US.
<http://tf.nist.gov/tf-cgi/wwvbmonitor_e.cgi> (Java required)
I've seen it strong enough that I can see the waveform on an
oscilloscope after a 60Khz passive filter.

As for bandwidth, the code is sent at 1 baud (1 bit/sec) which
produces about a 2Hz occupied bandwidth. Therefore, the maximum Q of
the antenna would need to be:
60Khz/ 2Hz = 30,000
before the antenna bandwidth becomes a problem.

Incidentally, while Googling away merrily, I found this on SPICE
models for a loop antenna. It's not quite in your xformer format, but
it might be useful:
<http://sidstation.loudet.org/antenna-theory-en.xhtml>
I won't pretend to understand what the author is doing until I read it
more carefully.

Incidentally, I used a WWVB code simulator driving a signal generator
to test my receiver:
<http://www.leapsecond.com/notes/wwvb2.htm>

If you're seriously into this, I suggest asking questions on the
time-nuts mailing list:
<https://www.febo.com/mailman/listinfo/time-nuts>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

236. Antenna connector corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 21:19:02 UTC
From: JIMMIE <JIMMIEDEE123@yahoo.com>
Message-ID: <934b4e0f-e545-4061-8c67-000a80a0bc7b@googlegroups.com>
Source record: 159

I just repaired (cleaned and reassembled) an antenna that had a problem with corrosion between the female chassis mount N connector and the aluminium plate it was mounted on. The connector was made of silver plated brass. Is there anything you can treat the connection with that will prevent this problem. I was thinking Alonox but I have no experience using this material and only know of using it with electrical wiring. Any suggestions would be appreciated.

Jimmie

237. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-07 22:14:08 UTC
From: Tim Williams <tmoranwms@charter.net>
Message-ID: <khb3cn$d6m$1@dont-email.me>
Source record: 160
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"rickman" <gnuarm@gmail.com> wrote in message
news:kha9e1$9qt$1@dont-email.me...
>> High Q isn't the goal, high radiation resistance is -- the bigger the
>> loop, the better it couples with free space, until it's a wave length
>> around.
>
> I'm not clear on why you keep referring to radiation resistance for a
> receiving antenna. Does this result in a larger received signal? I am
> concerned with maximizing the voltage at the input to the receiver.

You're also not concerned about that -- you're concerned about maximizing SNR at the receiver.

A Q of a million will get you gobs of "gain", but if it doesn't couple into free space, it's only the thermal noise of the loss generating that signal.

An antenna with high (expressed as ESR) radiation resistance might have a modest Q, but gives far better SNR because it couples to free space.

Raw volts don't matter, you can always throw more amplifiers at it (as long as they don't corrupt the SNR also!).

> Yes, a higher stepup ratio gets larger signal up to a point. That point
> is determined by the parasitic capacitance of the receiver input. That
> capacitance is reflected back through the transformer and affects the
> antenna tuning. In my simulations it creates a filter with two
> resonances.

Oooh, capacitance! I like capacitance. Capacitance is easy to cancel...inductors are good at that. :)

What's a nearby inductor working against that capacitance? The current transformer in your simulation, if its inductance can be controlled, would be an excellent candidate. The circuit effectively becomes a double tuned interstage transformer, like,

http://www.jrmagnetics.com/rf/doubtune/doubccl_c.php
This is two resonators coupled with a cap, but any coupling method will do. Capacitive, magnetic (putting the coils end-to-end) or electromagnetic (coils side-by-side) coupling does equally well; normal arrangements have them all in phase, so in practice, unshielded coils will need smaller coupling capacitance than designed, etc.

If you line up that 10p resonance with the operating frequency, you should get gobs more gain. In fact, because the reactances cancel, the driven

impedance will be much higher than you were expecting, and so will the gain. The CT might go from, say, 1:8 up to, who knows, 1:20? 1:100?

The bandwidth of that coupling (not necessarily of the antenna itself, so they should be similar bandwidths) is determined by the coupling coefficient (in the coupled-inductors case, simply k) and Q of the components.

If your receiver datasheet specifies an equivalent input circuit, you might be able to estimate the equivalent loss and optimize gain.

Tim

--
Deep Friar: a very philosophical monk.
Website: http://seventransistorlabs.com

238. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 02:28:24 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khdh9v$2bb$1@dont-email.me>
Source record: 169
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/7/2013 5:14 PM, Tim Williams wrote:
> "rickman"<gnuarm@gmail.com> wrote in message
> news:kha9e1$9qt$1@dont-email.me...
>>> High Q isn't the goal, high radiation resistance is -- the bigger the
>>> loop, the better it couples with free space, until it's a wave length
>>> around.
>>
>> I'm not clear on why you keep referring to radiation resistance for a
>> receiving antenna. Does this result in a larger received signal? I am
>> concerned with maximizing the voltage at the input to the receiver.
>
> You're also not concerned about that -- you're concerned about maximizing
> SNR at the receiver.

SNR would be good, but I am concerned with maximizing the signal actually.

> A Q of a million will get you gobs of "gain", but if it doesn't couple
> into free space, it's only the thermal noise of the loss generating that
> signal.

I think you aren't reading what I am writing. I said I wanted a Q over
100, not 1 million. I don't get why you keep talking in hyperbole.
What you are describing is not even a tradeoff between signal strength
and SNR. If there is no coupling, there is no signal.

> An antenna with high (expressed as ESR) radiation resistance might have a
> modest Q, but gives far better SNR because it couples to free space.

I have not found anything to indicate this produces a better receive
antenna. I have a formula for the effective height of a loop antenna
which is what determines the received signal strength at the antenna. It
does not calculate the radiation resistance, it uses the coil parameters
and the wire resistance. Is that a wrong formula?

> Raw volts don't matter, you can always throw more amplifiers at it (as
> long as they don't corrupt the SNR also!).

Maybe you didn't read my other posts. I am not using an amplifier. I
am running the antenna and coupler output directly into a digital input.

>> Yes, a higher stepup ratio gets larger signal up to a point. That point
>> is determined by the parasitic capacitance of the receiver input. That
>> capacitance is reflected back through the transformer and affects the
>> antenna tuning. In my simulations it creates a filter with two
>> resonances.
>

> Oooh, capacitance! I like capacitance. Capacitance is easy to
> cancel...inductors are good at that. :)
>
> What's a nearby inductor working against that capacitance? The current
> transformer in your simulation, if its inductance can be controlled, would
> be an excellent candidate. The circuit effectively becomes a double tuned
> interstage transformer, like,
>
> http://www.jrmagnetics.com/rf/doubtune/doubccl_c.php
> This is two resonators coupled with a cap, but any coupling method will
> do. Capacitive, magnetic (putting the coils end-to-end) or
> electromagnetic (coils side-by-side) coupling does equally well; normal
> arrangements have them all in phase, so in practice, unshielded coils will
> need smaller coupling capacitance than designed, etc.
>
> If you line up that 10p resonance with the operating frequency, you should
> get gobs more gain. In fact, because the reactances cancel, the driven
> impedance will be much higher than you were expecting, and so will the
> gain. The CT might go from, say, 1:8 up to, who knows, 1:20? 1:100?
>
> The bandwidth of that coupling (not necessarily of the antenna itself, so
> they should be similar bandwidths) is determined by the coupling
> coefficient (in the coupled-inductors case, simply k) and Q of the
> components.
>
> If your receiver datasheet specifies an equivalent input circuit, you
> might be able to estimate the equivalent loss and optimize gain.

The receiver input is high impedance, approximately 10 MOhms with a low capacitance between the differential inputs of not more than 10 pF.

Your description of what is happening is very terse and full of shortened terms that I don't understand. What do you mean "line up that 10p resonance with the operating frequency"? I assume you are referring to the 10 pF input capacitance. How does this get "lined up" with anything?

When you talk about reactances canceling, that sounds a lot like a tuned circuit at resonance. That is what I *am* doing and where this thread started. One problem with that is the lack of precision or stability of the parasitic capacitance. Any idea how to deal with that?

Have you looked at the simulation data I had posted? I think you are describing exactly the circuit we are simulating which I believe is an accurate representation of the circuit I plan to build. Is that not correct?

--

Rick

239. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 03:17:33 UTC
From: Jim Mueller <wrongname@nospam.com>
Message-ID: <5139584d$0$54952$c3e8da3$e408f015@news.astraweb.com>
Source record: 161
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Thu, 07 Mar 2013 09:50:11 -0500, rickman wrote:

> On 3/6/2013 8:13 PM, Tim Williams wrote:
>> "rickman"<gnuarm@gmail.com> wrote in message

<snip>
>
>
>>> I'm not familiar with the concept of voltage transformer vs. current
>>> transformer. How do you mean that?
>>
>> Current transformer measures current (its winding is in series),
>> potential transformer measures voltage (in parallel).
>
> Series and parallel with what? I'm not following this.
>
<snip>

An electric circuit consists of a source of power, a load, and something (like wires) connecting them. Transformers can be used if the source is providing alternating current. A voltage transformer is connected in parallel with the load so that the source, the transformer, and the load all see the same voltage. It can also be used to match a load to a source. A common example of a voltage transformer is the power transformer in a piece of equipment that changes the AC line voltage to whatever other voltages are required by the equipment.

A current transformer, on the other hand, is connected in series with the load so that the source, load, and transformer all have the same current flowing through them. The most common use of a current transformer is to measure the current flowing into a load. A clamp-on ammeter is a common example.

Historical examples of voltage and current transformers are the "picture tube brighteners" that were commonly used in TV sets to prolong the useful life of the CRT. There were two types, parallel and series. The parallel types were used in transformer operated TVs and consisted of a step-up transformer to raise the heater voltage of the CRT above normal to increase emission. The series type was used in sets with the tube heaters in series and consisted of a step-down transformer that raised the heater current above normal. Of course, raising either the voltage or the current also raised the other. These were, respectively, voltage and current transformers.

A loop antenna is a distributed source with the voltage being generated along the length of the wire and also having a magnetic field so that it can be used as part of a transformer. This blurs the distinction between a current and voltage transformer.

--
Jim Mueller wrongname@nospam.com

To get my real email address, replace wrongname with dadoheadman.
Then replace nospam with fastmail. Lastly, replace com with us.

240. Re: Antenna connector corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 03:32:04 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <1mlij8d14j1evdh194c1um4o26qcet4295@4ax.com>
Source record: 162

On Thu, 7 Mar 2013 13:19:02 -0800 (PST), JIMMIE
<JIMMIEDEE123@yahoo.com> wrote:

>I just repaired (cleaned and reassembled) an antenna that had a problem
>with corrosion between the female chassis mount N connector and the
>aluminium plate it was mounted on. The connector was made of
>silver plated brass. Is there anything you can treat the
>connection with that will prevent this problem.
>I was thinking Alonox but I have no experience using
>this material and only know of using it with electrical wiring.
>Any suggestions would be appreciated.

The corrosion wasn't between the silver and aluminum. It was between
the copper in the brass, and the aluminum.

The usual fix is to insert a washer made from some material half way
between copper and aluminum in the glavanic series. That's usually
stainless steel.

You may want to read about corrosion from an expert:
<http://yarchive.net/electr/galvanic_corrosion.html>
So whatever is necessary to exclude moisture from the sandwitch.

Alconox isn't going to do anything except temporarily clean the grease
and crud off the surface of the aluminum. It's really good stuff for
many things, but not for preventing corrosion.
<http://www.alconox.com>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

241. Re: Antenna connector corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 10:24:03 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnkjjeou.th6.gsm@cable.mendelson.com>
Source record: 163

Jeff Liebermann wrote:
>
> Alconox isn't going to do anything except temporarily clean the grease
> and crud off the surface of the aluminum. It's really good stuff for
> many things, but not for preventing corrosion.

I have in my eBay wish list a tub of conductive grease for antenna
connections.

I've never quite gotten around to buying it. :-)

Does it do any good?

Supposedly you use it like the antioxidant grease for aluminum power
wiring, except this is for antenna connectors. It gets in the threads
and resists water.

Geoff.

--
Geoffrey S. Mendelson, N3OWJ/4X1GM/KBUH7245/KBUW5379
It's Spring here in Jerusalem!!!

242. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 16:32:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <b94kj81askkv1io9k5sci9oqbdnrbip31l@4ax.com>
Source record: 164
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Thu, 07 Mar 2013 11:39:45 -0800, Jeff Liebermann <jeffl@cruzio.com>
wrote:

>Fortunately, WWVB is on-off
>keying with no amplitude component, so there's no incentive to add an
>AGC controlled input amplifier in order to maximize the A/D converters
>dynamic range.

Oops. WWVB does have an amplitude component and is not quite on-off
keying (OOK). There's a -17dB drop in RF signal level at the
beginning of each 1 second marker pulse. It was -10dB prior to 2005.
<http://en.wikipedia.org/wiki/WWVB#Modulation_depth>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

243. Re: Antenna connector corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 18:05:44 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <lg9kj8di1mogt72pfv6s9r8vmfkh4m9uhj@4ax.com>
Source record: 165

On Fri, 8 Mar 2013 10:24:03 +0000 (UTC), "Geoffrey S. Mendelson"
<gsm@mendelson.com> wrote:

>Jeff Liebermann wrote:
>>
>> Alconox isn't going to do anything except temporarily clean the grease
>> and crud off the surface of the aluminum. It's really good stuff for
>> many things, but not for preventing corrosion.
>
>I have in my eBay wish list a tub of conductive grease for antenna
>connections.
>
>I've never quite gotten around to buying it. :-)
>
>Does it do any good?

Maybe. It depends on the conductivity (ohms/square). If doped with
silver flakes, it will be quite good at producing improving an
electrical connection. If carbon, it will make a nice heater.
However, the real danger is if you remove the normal conduction path,
and you pump a fair amount of current or RF *THROUGH* the grease. No
matter how good the conductivity, it's going to get hot. Hot grease
explosions are not my idea of fun. I've had greasy metal explosions
in a spot welder which should be similar.

The purpose of conductive grease is to prevent rotating electrical
machinery from turning into a static electricity generator. Small
arcs across the bearing will eventually pit the surface and destroy
the bearing. Silver bearing grease is also good for improving the
thermal conductivity for heat sinks. I use it for CPU to heat sink
thermal grease.

>Supposedly you use it like the antioxidant grease for aluminum power
>wiring, except this is for antenna connectors. It gets in the threads
>and resists water.

If water gets into the threads, you're already lost. The threads are
too much of a labyrinth of holes to be sure that a grease only seal is
effective. Grease also does not insure an air tight connection, which
is really what is needed to prevent capillary action and/or internal
partial vacuum, from sucking in the water. In my never humble
opinion, the best waterproofing is wrapping the connectors from end to
end in 1" PTFE plumbing tape. Then apply a layer of Scotch 33
electrical tape over the PTFE layer to hold it in place. I had a
running experiment on my roof for about 10 years using this method. It
works and the connectors look like brand new when the PTFE tape is

removed. It's also VERY easy to do rework.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

244. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 18:44:36 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khdha1$2bb$2@dont-email.me>
Source record: 170
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/7/2013 2:39 PM, Jeff Liebermann wrote:
> On Thu, 07 Mar 2013 13:11:03 -0500, rickman<gnuarm@gmail.com> wrote:
>
>> I understand. But this is intended to be *very* low power and I haven't
>> found an amp I can use that is in the low double digits uW power
>> consumption range. I plan to use no amp and go straight to digital.
>
> I don't think that's possible. Unless your input A/D converter can
> operate in the microvolt region, it's going to have a difficult time
> dealing with the low signal levels. Fortunately, WWVB is on-off
> keying with no amplitude component, so there's no incentive to add an
> AGC controlled input amplifier in order to maximize the A/D converters
> dynamic range. Still, you need to work with something more than a few
> bits above the noise level. Incidentally, after midnight, you WWVB
> delivers about 100 uV/meter or more to continental US.
> <http://tf.nist.gov/tf-cgi/wwvbmonitor_e.cgi> (Java required)
> I've seen it strong enough that I can see the waveform on an
> oscilloscope after a 60Khz passive filter.

Yes, I have done my homework on the WWVB signal. I am at the fringe of the 100 uV/m contour. I would very much like to see the signal on an oscilloscope when I test this. They have a receiver not far from here in Gaithersburg, MD and the signal is often strong during the day. So much so that I don't follow why they say there is this day/night signal strength fluctuation. It looks much more random to me.

The WWVB signal is not truly on-off keying. I believe they use a 10 dB modulation factor for the AM signal. This is close to on-off I agree. But they also phase modulate the signal and I will be demodulating both to see which one works best in my design.

The ADC in my design is truly one bit. It is an LVDS input on an FPGA. I looked at delta-sigma (or is it sigma-delta? ;) conversion and got code from the chip vendor for a simplistic implementation. I don't think I have the power budget for that and am using a much simpler 1 bit ADC at 4x the carrier rate. The bit stream is multiplied by quadrature carriers at 60 kHz and each stream summed for 1/30 of a second to implement what can be considered a DFT bin, a decimated FIR filter or a decimated down conversion; take your pick, they are all mathematically the same in this case because the sampling is synchronous to the carrier (or very close to synchronous).

What comes out the other end of this processing gains nearly 40 dB in SNR. My simulations show a recoverable signal when it is more than 20

dB below the noise.

Of course, I have not tested this yet on a real signal. I want to run some tests on the antenna and coupling transformer to verify the simulation. Then I will start working with the FPGA to see if I can make the LVDS input do what I want. I have ideas on how to bend digital circuits to do my bidding. This LVDS input is why I want as large a signal as possible from the antenna. With the high impedance input on the chip I should be able to boost the signal pretty well with just passive devices and signal processing.

The loop antenna is rather large. I would like to end up with something smaller. Once I get this working with a shielded loop antenna I will check out the ferrite core antennas. My understanding is that they don't produce as much signal.

> As for bandwidth, the code is sent at 1 baud (1 bit/sec) which
> produces about a 2Hz occupied bandwidth. Therefore, the maximum Q of
> the antenna would need to be:
> 60Khz/ 2Hz = 30,000
> before the antenna bandwidth becomes a problem.

I'm not sure how you came up with 2 Hz for the bandwidth. In this case the bandwidth is not just twice the bit rate. I believe the stated "system" bandwidth is around 5 Hz (from a 1995 paper prior to addition of the phase modulation). Regardless, I am sampling at 30 Hz and if I expect to see significant changes in phase or amplitude within one sample time, I need an appropriate bandwidth.

Even so, that is not the limiting factor. The limiting factor is the difficulty in holding tune with drift in passive component values. The Q can be raised by increasing the turns ratio on the transformer, but it becomes so sensitive to the parasitic capacitance that the sensitivity drops 10 dB with a 1 pF change.

> Incidentally, while Googling away merrily, I found this on SPICE
> models for a loop antenna. It's not quite in your xformer format, but
> it might be useful:
> <http://sidstation.loudet.org/antenna-theory-en.xhtml>
> I won't pretend to understand what the author is doing until I read it
> more carefully.

Thanks. I will take a look at that.

> Incidentally, I used a WWVB code simulator driving a signal generator
> to test my receiver:
> <http://www.leapsecond.com/notes/wwvb2.htm>

I will be needing a time code simulator. I designed a commercial product that works with the IRIG-B time code which is similar. The functionality is not hard, it is just a matter of generating the data, encoding it into the modulation pattern, then impressing the carrier with the modulation. Working in an FPGA this sort of stuff is easy.

The trouble is if you make the same mistake in both the generator and receiver they work just fine in simulation, but not with other equipment. lol

I'll take a look at this link.

> If you're seriously into this, I suggest asking questions on the
> time-nuts mailing list:
> <https://www.febo.com/mailman/listinfo/time-nuts>

I might look into that. Certainly it can't hurt to get more input.

--

Rick

245. Re: Antenna connector corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 19:02:18 UTC
From: Paul Drahn <pdrahn@webformixair.com>
Message-ID: <khdch9$633$1@dont-email.me>
Source record: 168

On 3/8/2013 2:24 AM, Geoffrey S. Mendelson wrote:
> Jeff Liebermann wrote:
>>
>> Alconox isn't going to do anything except temporarily clean the grease
>> and crud off the surface of the aluminum. It's really good stuff for
>> many things, but not for preventing corrosion.
>
> I have in my eBay wish list a tub of conductive grease for antenna
> connections.
>
> I've never quite gotten around to buying it. :-)
>
> Does it do any good?
>
> Supposedly you use it like the antioxidant grease for aluminum power
> wiring, except this is for antenna connectors. It gets in the threads
> and resists water.
>
> Geoff.
>
>
>
Don't bother. It the world's worst dust collector! Then it's really hard
to get the combination off when you take the joint apart.

Paul, KD7HB

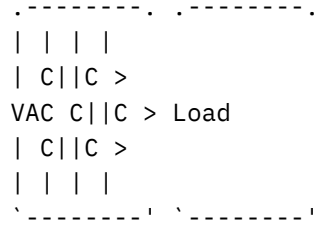
246. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 21:18:18 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khdkgglbg1@dont-email.me>
Source record: 171
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/7/2013 10:17 PM, Jim Mueller wrote:
> On Thu, 07 Mar 2013 09:50:11 -0500, rickman wrote:
>
>> On 3/6/2013 8:13 PM, Tim Williams wrote:
>>> "rickman"<gnuarm@gmail.com> wrote in message
>
> <snip>
>>
>>
>>>> I'm not familiar with the concept of voltage transformer vs. current
>>>> transformer. How do you mean that?
>>>
>>> Current transformer measures current (its winding is in series),
>>> potential transformer measures voltage (in parallel).
>>
>> Series and parallel with what? I'm not following this.
>>
> <snip>
>
> An electric circuit consists of a source of power, a load, and something
> (like wires) connecting them. Transformers can be used if the source is
> providing alternating current. A voltage transformer is connected in
> parallel with the load so that the source, the transformer, and the load
> all see the same voltage. It can also be used to match a load to a
> source. A common example of a voltage transformer is the power
> transformer in a piece of equipment that changes the AC line voltage to
> whatever other voltages are required by the equipment.
>
> A current transformer, on the other hand, is connected in series with the
> load so that the source, load, and transformer all have the same current
> flowing through them. The most common use of a current transformer is to
> measure the current flowing into a load. A clamp-on ammeter is a common
> example.
>
> Historical examples of voltage and current transformers are the "picture
> tube brighteners" that were commonly used in TV sets to prolong the
> useful life of the CRT. There were two types, parallel and series. The
> parallel types were used in transformer operated TVs and consisted of a
> step-up transformer to raise the heater voltage of the CRT above normal
> to increase emission. The series type was used in sets with the tube
> heaters in series and consisted of a step-down transformer that raised
> the heater current above normal. Of course, raising either the voltage
> or the current also raised the other. These were, respectively, voltage

> and current transformers.
>
> A loop antenna is a distributed source with the voltage being generated
> along the length of the wire and also having a magnetic field so that it
> can be used as part of a transformer. This blurs the distinction between
> a current and voltage transformer.

Is this a current transformer or a voltage transformer?



--

Rick

247. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 21:20:39 UTC
From: Tim Williams <tmoranwms@charter.net>
Message-ID: <khdkkd$m34$1@dont-email.me>
Source record: 172
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"rickman" <gnuarm@gmail.com> wrote in message
news:khdh9v$2bb$1@dont-email.me...
>> A Q of a million will get you gobs of "gain", but if it doesn't couple
>> into free space, it's only the thermal noise of the loss generating
>> that
>> signal.
>
> I think you aren't reading what I am writing. I said I wanted a Q over
> 100, not 1 million. I don't get why you keep talking in hyperbole. What
> you are describing is not even a tradeoff between signal strength and
> SNR. If there is no coupling, there is no signal.

It may sound like hyperbole, but it's mathematically sound. The midpoint theorem, for example, guarantees that, between two points, you must've hit some point inbetween, somewhere, as long as the function is continuous. More usefully, functions arising in electronics are often one-to-one, so it's not only true that you are guaranteed midpoints, but you'll find them in order, too.

If you aren't looking at the extreme cases, you aren't doing your job. Whatever's left inbetween can simply be interpolated!

The point here being, an antenna which doesn't couple into free space obviously has a crappy SNR. The signal level can be anything, it doesn't matter. The signal need not be small, because internal losses generate thermal noise. With sufficient Q, you can push that thermal noise up to your receiver threshold (which you said is an ADC) and detect signal. It'll be bandlimited, ~60kHz noise, a useless signal, but present nonetheless.

In general, antennas which do couple strongly to free space have low Qs. A 1/2 wave resonant dipole has a Q of only 1 or 2, so bothering to call it resonant is actually kind of weak. This is similarly true for a large loop, which of course would be highly impractical here. So there must be some middle case where SNR is reasonably unaffected, which will be the best choice antenna.

Since atmospheric noise dominates, the antenna can stand to be pretty small.

>> Raw volts don't matter, you can always throw more amplifiers at it (as
>> long as they don't corrupt the SNR also!).
>
> Maybe you didn't read my other posts. I am not using an amplifier. I
> am running the antenna and coupler output directly into a digital input.

You hadn't mentioned that before...

> The receiver input is high impedance, approximately 10 MOhms with a low
> capacitance between the differential inputs of not more than 10 pF.

Any ESR? Example, the ATmega series 10 bit ADC specifies, I think, around 10pF + 10k ESR (somewhat depending on how many mux switches it's going through to get there).

> Your description of what is happening is very terse and full of
> shortened terms that I don't understand.

I could write a book on the subject to explore it in detail, but there are many available already, and there are too many holes in my knowledge to really be worth it, plus this is Usenet, you get what you pay for. I was hoping you'd Google in the blanks.

> What do you mean "line up that
> 10p resonance with the operating frequency"? I assume you are referring
> to the 10 pF input capacitance. How does this get "lined up" with
> anything?

There's yet another theorem in networks that has to do with matching.

A resonant tank's impedance varies wildly with frequency. But it will always be resistive at resonance. If you connect this to another network, which has a resistive input impedance at the same frequency, you don't care what the L and C are, it will simply work -- old fashioned resistor divider action!

You *do* have to worry about L and C and reactance and bandwidth to solve for the frequency response and stuff, but you can at least approximate that with Q factor (i.e., how much loss is draining power out of the system).

So if your ADC input is exactly 10p + 10M, you could resonate it with 0.7H (well...), which has a resonant impedance of 264k, and thus a reasonable Q of 38. (The real world typically bitchslaps the theorist at this point, as 0.7H chokes with <10pF parasitic capacitance and Q > 38 at 60kHz don't exist.) If the capacitance's ESR is less than 6.9kohms (i.e., 264k / 38), it won't have significant effect.

You can couple to this tank via parallel or series. If you did series, the input impedance would be 264k / 38, or 6.9k, not horrible; going from the 0.78 ohm loop to this in a single transformer requires a 1:100 CT, which works fine at 60kHz. (This CT would require high inductance, so as to avoid skewing results, but that's typical of a CT. An amorphous core CT would probably suffice. So at least that part is physically realizable.) Note the irony of coupling a current loop to a current loop, where in both cases, the CT looks like a small impedance relative to the loop it's within. That's simply how huge the impedance at the ADC is.

Since all these resistances are matched, the power transfer theorem holds, and you're pushing as much voltage and power into the ADC as possible. The bandwidth is about 1.6kHz, so the thermal noise floor is around 5uV at

the ADC. A received power of 1nW will generate 0.1V, which is probably a reasonable figure. The SNR of the receiver is limited by quantization noise for <14 bits, thermal for >14 bits. A 16 bit converter wouldn't be too expensive at this sample rate (note it's the analog sample-and-hold speed which limits direct conversion performance; a sigma-delta, running at 100Hz, with no S&H, won't see jack).

> When you talk about reactances canceling, that sounds a lot like a tuned
> circuit at resonance. That is what I *am* doing and where this thread
> started. One problem with that is the lack of precision or stability of
> the parasitic capacitance. Any idea how to deal with that?

Considering theoretical 0.7H chokes aren't commercially available, you might swamp it with more C, which stabilizes the value, and requires less L to resonate. Rub: resonant impedance is lower, so the Q of the components must be higher in order to achieve the same performance. Even with a Q of 200, you still need over 0.25H, which is just as unlikely a combination. Well, if you really wanted to try, maybe a gapped ferrite-cored inductor could be made. Still, the only practical choice seems to be lower signal level.

So ultimately, the question is, how little signal can you tolerate before you need an amplifier? How many bits of conversion, how much sample rate can you afford before a linear amplifier becomes cheaper on the power budget?

> Have you looked at the simulation data I had posted? I think you are
> describing exactly the circuit we are simulating which I believe is an
> accurate representation of the circuit I plan to build. Is that not
> correct?

It's getting closer, but with adjustments (to the transformer inductance) to make the resonances line up (same frequencies). Plus whatever compromise you need to make on gain.

Tim

--
Deep Friar: a very philosophical monk.
Website: http://seventransistorlabs.com

248. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 21:30:53 UTC
From: Tim Williams <tmoranwms@charter.net>
Message-ID: <khdl8n$pf9$1@dont-email.me>
Source record: 173
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

```
"rickman" <gnuarm@gmail.com> wrote in message
news:khdkgg$lbg$1@dont-email.me...
> Is this a current transformer or a voltage transformer?
> .--------. .--------.
> | | | |
> | C||C >
> VAC C||C > Load
> | C||C >
> | | | |
> `--------' `--------'

Voltage. How about this?

> .--------. .--------.
> | | | |
> | C||C >
> IAC C||C > Load
> | C||C >
> | | | |
> `--------' `--------'

Tim

--
Deep Friar: a very philosophical monk.
Website: http://seventransistorlabs.com
```

249. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 21:51:18 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khdmeavkr1@dont-email.me>
Source record: 174
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/8/2013 4:20 PM, Tim Williams wrote:
>
> It may sound like hyperbole, but it's mathematically sound. The midpoint
> theorem, for example, guarantees that, between two points, you must've hit
> some point inbetween, somewhere, as long as the function is continuous.
> More usefully, functions arising in electronics are often one-to-one, so
> it's not only true that you are guaranteed midpoints, but you'll find them
> in order, too.
>
> If you aren't looking at the extreme cases, you aren't doing your job.
> Whatever's left inbetween can simply be interpolated!
>
> The point here being, an antenna which doesn't couple into free space
> obviously has a crappy SNR. The signal level can be anything, it doesn't
> matter. The signal need not be small, because internal losses generate
> thermal noise. With sufficient Q, you can push that thermal noise up to
> your receiver threshold (which you said is an ADC) and detect signal.
> It'll be bandlimited, ~60kHz noise, a useless signal, but present
> nonetheless.
>
> In general, antennas which do couple strongly to free space have low Qs.
> A 1/2 wave resonant dipole has a Q of only 1 or 2, so bothering to call it
> resonant is actually kind of weak. This is similarly true for a large
> loop, which of course would be highly impractical here. So there must be
> some middle case where SNR is reasonably unaffected, which will be the
> best choice antenna.

I was warned a long time ago to be wary of people speaking in
"glittering generalities". You seem to insist on using terms without
giving a mathematical basis. How about if we use some math?

V = (2 * pi * A * N * E * cos(theta)) / lambda

V is the voltage on the antenna,
A is the loop area,
N is the number of turns,
E is the field strength,
theta is the rotation angle of the antenna and the transmitter (just
consider this term to be 1,
lamba is the wavelength (c/f)

This is multiplied by the Q factor when resonated by a capacitor. So
higher Q, higher signal.

Where in here do you think I am having a problem?

> Since atmospheric noise dominates, the antenna can stand to be pretty
> small.

You are making assumptions that don't hold true in my design.

>>> Raw volts don't matter, you can always throw more amplifiers at it (as
>>> long as they don't corrupt the SNR also!).
>>
>> Maybe you didn't read my other posts. I am not using an amplifier. I
>> am running the antenna and coupler output directly into a digital input.
>
> You hadn't mentioned that before...

You didn't ask.

>> The receiver input is high impedance, approximately 10 MOhms with a low
>> capacitance between the differential inputs of not more than 10 pF.
>
> Any ESR? Example, the ATmega series 10 bit ADC specifies, I think, around
> 10pF + 10k ESR (somewhat depending on how many mux switches it's going
> through to get there).

FET input resistance. I will double check that though.

>> Your description of what is happening is very terse and full of
>> shortened terms that I don't understand.
>
> I could write a book on the subject to explore it in detail, but there are
> many available already, and there are too many holes in my knowledge to
> really be worth it, plus this is Usenet, you get what you pay for. I was
> hoping you'd Google in the blanks.

I thought I was doing well, but you seem to be telling me I am making
mistakes, but I can't figure out what they might be.

>> What do you mean "line up that
>> 10p resonance with the operating frequency"? I assume you are referring
>> to the 10 pF input capacitance. How does this get "lined up" with
>> anything?
>
> There's yet another theorem in networks that has to do with matching.
>
> A resonant tank's impedance varies wildly with frequency. But it will
> always be resistive at resonance. If you connect this to another network,
> which has a resistive input impedance at the same frequency, you don't
> care what the L and C are, it will simply work -- old fashioned resistor
> divider action!
>
> You *do* have to worry about L and C and reactance and bandwidth to solve
> for the frequency response and stuff, but you can at least approximate
> that with Q factor (i.e., how much loss is draining power out of the
> system).
>
> So if your ADC input is exactly 10p + 10M, you could resonate it with 0.7H

> (well...), which has a resonant impedance of 264k, and thus a reasonable Q
> of 38. (The real world typically bitchslaps the theorist at this point,
> as 0.7H chokes with<10pF parasitic capacitance and Q> 38 at 60kHz don't
> exist.) If the capacitance's ESR is less than 6.9kohms (i.e., 264k / 38),
> it won't have significant effect.
>
> You can couple to this tank via parallel or series. If you did series,
> the input impedance would be 264k / 38, or 6.9k, not horrible; going from
> the 0.78 ohm loop to this in a single transformer requires a 1:100 CT,
> which works fine at 60kHz. (This CT would require high inductance, so as
> to avoid skewing results, but that's typical of a CT. An amorphous core
> CT would probably suffice. So at least that part is physically
> realizable.) Note the irony of coupling a current loop to a current loop,
> where in both cases, the CT looks like a small impedance relative to the
> loop it's within. That's simply how huge the impedance at the ADC is.
>
> Since all these resistances are matched, the power transfer theorem holds,
> and you're pushing as much voltage and power into the ADC as possible.
> The bandwidth is about 1.6kHz, so the thermal noise floor is around 5uV at
> the ADC. A received power of 1nW will generate 0.1V, which is probably a
> reasonable figure. The SNR of the receiver is limited by quantization
> noise for<14 bits, thermal for>14 bits. A 16 bit converter wouldn't be
> too expensive at this sample rate (note it's the analog sample-and-hold
> speed which limits direct conversion performance; a sigma-delta, running
> at 100Hz, with no S&H, won't see jack).
>
>> When you talk about reactances canceling, that sounds a lot like a tuned
>> circuit at resonance. That is what I *am* doing and where this thread
>> started. One problem with that is the lack of precision or stability of
>> the parasitic capacitance. Any idea how to deal with that?
>
> Considering theoretical 0.7H chokes aren't commercially available, you
> might swamp it with more C, which stabilizes the value, and requires less
> L to resonate. Rub: resonant impedance is lower, so the Q of the
> components must be higher in order to achieve the same performance. Even
> with a Q of 200, you still need over 0.25H, which is just as unlikely a
> combination. Well, if you really wanted to try, maybe a gapped
> ferrite-cored inductor could be made. Still, the only practical choice
> seems to be lower signal level.
>
> So ultimately, the question is, how little signal can you tolerate before
> you need an amplifier? How many bits of conversion, how much sample rate
> can you afford before a linear amplifier becomes cheaper on the power
> budget?
>
>> Have you looked at the simulation data I had posted? I think you are
>> describing exactly the circuit we are simulating which I believe is an
>> accurate representation of the circuit I plan to build. Is that not
>> correct?
>

> It's getting closer, but with adjustments (to the transformer inductance)
> to make the resonances line up (same frequencies). Plus whatever
> compromise you need to make on gain.

We are still having communications difficulties. You keep talking in terms I can't relate to. I don't need you to write a book, but I do need you to communicate clearly.

I am using a 1 bit ADC. Don't assume that I am doing what you have done in the past.

--

Rick

250. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 21:51:57 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khdmfhvkr2@dont-email.me>
Source record: 175
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

```
On 3/8/2013 4:30 PM, Tim Williams wrote:
> "rickman"<gnuarm@gmail.com> wrote in message
> news:khdkgg$lbg$1@dont-email.me...
>> Is this a current transformer or a voltage transformer?
>> .--------. .--------.
>> | | | |
>> | C||C>
>> VAC C||C> Load
>> | C||C>
>> | | | |
>> `--------' `--------'
>
> Voltage. How about this?
>
>> .--------. .--------.
>> | | | |
>> | C||C>
>> IAC C||C> Load
>> | C||C>
>> | | | |
>> `--------' `--------'
>
> Tim
>

I have to say I don't follow the distinction. It is a transformer, no?

--

Rick
```

251. Cute Ham-Related Commercial

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-08 21:55:26 UTC
From: Sal <salmonella@food>
Message-ID: <khdml2$177$1@dont-email.me>
Source record: 176

http://www.youtube.com/watch?v=aTeAtPFEuyc

We amateurs have made it onto Kraft's list of people to be recognized.

"Sal"

252. Re: Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-09 03:17:14 UTC
From: Bob <not@real.com>
Message-ID: <2g8lj89ps5du3guti46ffs3e16edm25tug@4ax.com>
Source record: 166

On Wed, 6 Mar 2013 10:21:35 -0500, "Ralph Mowery" <rmowery28146@earthlink.net>
wrote:

>
>"Bob" <not@real.com> wrote in message
>news:c3ocj8d1c3j4bio0venlt9e78divahr7li@4ax.com...
>> Like the subject asks, are the "generic" versions of LMR-400 and LMR-400
>> Ultraflex as good as the "name brand" or is it not worth the savings? Time
>> for
>> new coax, so I wanted to get input from those who are familiar with both
>> before
>> buying either.
>>
>> Thanks, and 73,
>> Bob KB2ZGN
>
>
>Depends on what brands you are talking about being the 'generic' version. I
>am using some of the Davis Buryflex that is similar to lmr400 ultra flex. I
>like it very much and have ran the loss tests on it on 2 meters and 440 mhz
>and it meets the specs. I have 4 runs of it to the beams on my tower
>covering a tribander, 6, 2, and 440. They have been up about 5 years with
>no noticable problems.
>
>
Thanks for all the information. Of course, when I said "name brand" I was
referring to the Times Microwave LMR-400 Ultraflex. As for the "generic" brands,
I have to apologize for not being able to give you specifics, I have seen
several different names referenced when searching, especially on eBay, but on
some other sites as well. I will be sure to look out for the Davis Buryflex the
next time I do a search. I plan on using it for 80m to 6m to one antenna, and 2m
and 70cm to another.

What gave me pause, and want to talk to those who may be familiar with this
issue, was the difference in prices. Times Microwave coax is easily 30 to 40
percent more expensive, and while I am not a cheep skate, neither would I like
to waste money if the difference is not warranted. I just checked out the Davis
site, http://www.davisrf.com/buryflex.php and for lengths less than 100 feet,
the price is 95ï¿½/foot, and less than 499 feet is 89ï¿½/foot, very good prices
compared to the Times Microwave prices. Looks like I need look no further.

Thanks again Ralph for your input, it is very much appreciated.

73, Bob KB2ZGN

253. Re: Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-09 03:48:07 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <udydnW3KedVlLafMnZ2dnUVZ_sidnZ2d@earthlink.com>
Source record: 167

"Bob" <not@real.com> wrote in message
news:2g8lj89ps5du3guti46ffs3e16edm25tug@4ax.com...
>>
> Thanks for all the information. Of course, when I said "name brand" I was
> referring to the Times Microwave LMR-400 Ultraflex. As for the "generic"
> brands,
> I have to apologize for not being able to give you specifics, I have seen
> several different names referenced when searching, especially on eBay, but
> on
> some other sites as well. I will be sure to look out for the Davis
> Buryflex the
> next time I do a search. I plan on using it for 80m to 6m to one antenna,
> and 2m
> and 70cm to another.
>
> What gave me pause, and want to talk to those who may be familiar with
> this
> issue, was the difference in prices. Times Microwave coax is easily 30 to
> 40
> percent more expensive, and while I am not a cheep skate, neither would I
> like
> to waste money if the difference is not warranted. I just checked out the
> Davis
> site, http://www.davisrf.com/buryflex.php and for lengths less than 100
> feet,
> the price is 95¢/foot, and less than 499 feet is 89¢/foot, very good
> prices
> compared to the Times Microwave prices. Looks like I need look no further.
>
> Thanks again Ralph for your input, it is very much appreciated.
>
> 73, Bob KB2ZGN

There are several things to look for in the coax. First look at the center conductor. The larger the beter as that is where most of the loss is. Solid wire will have slightly less loss, but if used with a rotator, it can flex enough to break over the years. Then look at the shield, especially the braid. It should be around 95% or beter. This is where the next loss is. Most of the low loss coax has a foil type shield plus 95% or beter braid. That applies for under 1000 Mhz anyway. Look at the velocity factor. The low loss will normally be .80 or higher.

Davis BuryFlex is good. Belden is good, but stay away from the origional 9913. That hollow tube can fill with water if used outside. I had a couple of runs of it up for about 10 years with no problems, but many have had problems.

It pays to get some good coax as it should last for many years. In my case I put up 4 beams on a tower and it is going to be a lot of trouble to replace it if I ever have to.

At the priceof coax, you do want to spend a little more, but no need to pay more than needed.

Also get some good connectors. Especially the ones going next to the antenna as they are hard to replace.

254. Re: Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-09 10:33:58 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkjm40m.vlb.nomail@xs8.xs4all.nl>
Source record: 177

Jef <jeff@assystems.com> wrote:
>
>> First look at the center
>> conductor. The larger the beter as that is where most of the loss is. Solid
>> wire will have slightly less loss, but if used with a rotator, it can flex
>> enough to break over the years. Then look at the shield, especially the
>> braid. It should be around 95% or beter. This is where the next loss is.
>> Most of the low loss coax has a foil type shield plus 95% or beter braid.
>> That applies for under 1000 Mhz anyway. Look at the velocity factor. The
>> low loss will normally be .80 or higher.
>
> Just to point out that the diameter of the centre conductor is fixed by
> the impedance of the coax, the outer diameter, and the dielectric
> constant of the insulator. So for a cable that will fit in a PL259 or N
> type it means that you will only have a very limited choice or inner
> diameters that are dependant on the dielectric used, and that dielectric
> is likely to have just as significant effect on loss as the diameter of
> the inner, more as the frequency goes up. However, lower loss insulators
> generally have a lower dielectric constant which also mean a larger
> diameter inner, for a fixed outer diameter.
>
> Jeff

Also, it needs to be pointed out that the original poster asked about
differences in make of coax, while the discussion now focuses mainly
on type of coax.

Of course, that is a different topic. There are differences between
types of coax (solid center vs stranded, solid dielectrum vs foam
or air or helix or bamboo etc, foil shield vs braid or both), but
what the OP asked is if an LMR-400 from one manufacturer is equal
to an LMR-400 from another manufacturer.

In that case, the diameters, insulation types, braid types etc should
be the same and it is only thw manufacturing quality that would be
different.

However, always check. There always are manufacturers that try to
get away with using less copper in the braid, for example. Copper
is expensive these days.

255. Re: Cute Ham-Related Commercial

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-09 18:30:30 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <0jvmj8h45b0ic954mcfvmlcjus20lpf14i@4ax.com>
Source record: 178

On Fri, 8 Mar 2013 13:55:26 -0800, "Sal" <salmonella@food
poisoning.org> wrote:

>http://www.youtube.com/watch?v=aTeAtPFEuyc
>We amateurs have made it onto Kraft's list of people to be recognized.
>"Sal"

Look at the radio in the background. The Channel "33" suggests that
it's a CB radio. Same with the tone of voice of the guy talking.

<http://www.kraftrecipes.com/Products/ProductInfoDisplay.aspx?SiteId=1&Product=2100061161>
Better eating through chemistry.
18% saturated fat. Yuck...

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

256. Wave propagation on wire surface

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-09 20:17:26 UTC
From: Antonio I0JX <vernucci@tin.it>
Message-ID: <513b98d0$0$26774$4fafbaef@reader2.news.tin.it>
Source record: 179

Please your opinion on the subject tecnology:
http://www.corridorsystems.com/Technology.html

73

Antonio I0JX
Rome Italy

257. Re: Wave propagation on wire surface

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-09 20:29:39 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <M8-dnRhRyqopBqbMnZ2dnUVZ_qudnZ2d@earthlink.com>
Source record: 180

They call it new, but it has been around for about 60 years. Most often called a G-line.

http://www.toddsatogata.net/BIW12Prelim/papers/tupg007.pdf

If you do not have any bends in the line and the launchers are correct, it is suspose to be low loss.

"Antonio I0JX" <vernucci@tin.it> wrote in message news:513b98d0$0$26774$4fafbaef@reader2.news.tin.it...
> Please your opinion on the subject tecnology:
> http://www.corridorsystems.com/Technology.html
>
> 73
>
> Antonio I0JX
> Rome Italy
>
>

258. Re: Wave propagation on wire surface

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-09 21:28:21 UTC
From: Antonio I0JX <vernucci@tin.it>
Message-ID: <513ba96f$0$40353$4fafbaef@reader1.news.tin.it>
Source record: 181

"Ralph Mowery" ha scritto nel messaggio
news:M8-dnRhRyqopBqbMnZ2dnUVZ_qudnZ2d@earthlink.com...

They call it new, but it has been around for about 60 years. Most often called a G-line.

http://www.toddsatogata.net/BIW12Prelim/papers/tupg007.pdf

If you do not have any bends in the line and the launchers are correct, it is suspose to be low loss.

They call it "H-line" opposite to the old Goubau "G-line".

In the paper you cited I read: "The principle is based on non-radiating surface waves which are bound to the wire due to surface imperfections, e.g. a dielectric layer which can be a simple isolation." So it would seem that, without a dielectric, the system would not properly work.

Corridor systems instead claims that their H-line works with bare wire too.

73

Tony I0JX

259. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-10 06:32:18 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <ma7oj855l31sc54nsbr3uqo8k0pa2um68j@4ax.com>
Source record: 182
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Fri, 08 Mar 2013 13:44:36 -0500, rickman <gnuarm@gmail.com> wrote:

>I am at the fringe of
>the 100 uV/m contour. I would very much like to see the signal on an
>oscilloscope when I test this.

I built a passive 60KHz bandpass filters out of a collection of
ferrite cores from an old modem front end. I left it at a previous
consulting job, but can resurrect the design if necessary.
Incidentally, during my limited testing at home, I found that the
biggest determent to decent reception was all the switching power
supply noise found around the house. I finally ended up using a
battery power oscilloscope
<http://802.11junk.com/jeffl/pics/drivel/slides/tek213.html>
a gel cell for powering the RF amp, and turning off the main power to
the house. Then, I could sorta see a signal.

>They have a receiver not far from here
>in Gaithersburg, MD and the signal is often strong during the day. So
>much so that I don't follow why they say there is this day/night signal
>strength fluctuation. It looks much more random to me.

<http://tf.nist.gov/tf-cgi/wwvbgraph_e.cgi?5636103007>
Very random. Compare the above graph with Santa Clara which looks
less random:
<http://tf.nist.gov/tf-cgi/wwvbgraph_e.cgi?5636105007>

On the east coast, besides a weak signal, you also have the potential
for 60KHz interference from the UK:
<http://en.wikipedia.org/wiki/MSF_time_signal>

I had a 100KHz LORAN antenna on the roof of a former employer. The
signal was just fine, until someone turned on the mercury vapor arc
parking lot lamps at night. They were changed to low pressure sodium,
which made testing possible at night.

Incidentally, got any clue as to the vertical scale? My guess(tm) is
20 uv/meter signal strength per division, but I'm not sure.

>The WWVB signal is not truly on-off keying. I believe they use a 10 dB
>modulation factor for the AM signal. This is close to on-off I agree.

It's now 17dB drop at the beginning of each UTC second. The change
came in about 2008.

>But they also phase modulate the signal and I will be demodulating both
>to see which one works best in my design.

The BPSK signal is much better at rejecting interference and digging
the signal out of the noise. I don't know exactly how much, but I'm
sure it's in a NIST publication somewhere.

>The ADC in my design is truly one bit. It is an LVDS input on an FPGA.
> I looked at delta-sigma (or is it sigma-delta? ;)

It's delta-sigma.

>The loop antenna is rather large. I would like to end up with something
>smaller. Once I get this working with a shielded loop antenna I will
>check out the ferrite core antennas. My understanding is that they
>don't produce as much signal.

Not exactly. Small loopsticks receive a proportional amount of noise.
The ratio of signal to atmospheric noise remains roughly the same
within a fixed bandwidth for any antenna. That's why tiny little
loopsticks, inside "atomic time" wristwatches work. The small
loopsticks also use the magnetic field instead of the electric field,
which is why they can be made so small.
<http://en.wikipedia.org/wiki/Loop_antenna#Small_loops>

>> As for bandwidth, the code is sent at 1 baud (1 bit/sec) which
>> produces about a 2Hz occupied bandwidth. Therefore, the maximum Q of
>> the antenna would need to be:
>> 60Khz/ 2Hz = 30,000
>> before the antenna bandwidth becomes a problem.
>
>I'm not sure how you came up with 2 Hz for the bandwidth. In this case
>the bandwidth is not just twice the bit rate. I believe the stated
>"system" bandwidth is around 5 Hz (from a 1995 paper prior to addition
>of the phase modulation).

Ok, I made a bad guess(tm). Even at 5Hz BW, the maximum Q of
60KHz / 5Hz = 12,000
is not going to happen in a loop or loopstick antenna.

>Even so, that is not the limiting factor. The limiting factor is the
>difficulty in holding tune with drift in passive component values.

Agreed.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

260. Re: Antenna connector corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-10 10:56:37 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <sG1eKwQlbGPRFwCZ@g3ohx.demon.co.uk>
Source record: 183

```
In message <khdch9$633$1@dont-email.me>, Paul Drahn
<pdrahn@webformixair.com> writes
>On 3/8/2013 2:24 AM, Geoffrey S. Mendelson wrote:
>> Jeff Liebermann wrote:
>>>
>>> Alconox isn't going to do anything except temporarily clean the grease
>>> and crud off the surface of the aluminum. It's really good stuff for
>>> many things, but not for preventing corrosion.
>>
>> I have in my eBay wish list a tub of conductive grease for antenna
>> connections.
>>
>> I've never quite gotten around to buying it. :-)
>>
>> Does it do any good?
>>
>> Supposedly you use it like the antioxidant grease for aluminum power
>> wiring, except this is for antenna connectors. It gets in the threads
>> and resists water.
>>
>> Geoff.
>>
>>
>>
>Don't bother. It the world's worst dust collector! Then it's really
>hard to get the combination off when you take the joint apart.
>
One of best ways of preventing corrosion of connectors and connections
is to give then a good waft of WD40 before, during and after assembly
(don't go mad, but don't be too mean), wipe off 'not too well' with a
cloth lightly impregnated with some WD40 (ie slightly oily), and tape up
tightly with self-amalgamating tape. The connection will last for ever.
--
Ian
```

261. +$57,531 Profit Generated per week

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-10 13:21:06 UTC
From: m.chinnamnaidu@gmail.com
Message-ID: <9e9a58cd-a2f4-45be-a16e-2c089f12dca1@googlegroups.com>
Source record: 184

+$57,531 Profit Generated per week

http://ff866roj6jnjrjma1br2np9o12.hop.clickbank.net/

262. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-10 21:09:45 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khisodljr1@dont-email.me>
Source record: 185
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/10/2013 1:32 AM, Jeff Liebermann wrote:
> On Fri, 08 Mar 2013 13:44:36 -0500, rickman<gnuarm@gmail.com> wrote:
>
>> I am at the fringe of
>> the 100 uV/m contour. I would very much like to see the signal on an
>> oscilloscope when I test this.
>
> I built a passive 60KHz bandpass filters out of a collection of
> ferrite cores from an old modem front end. I left it at a previous
> consulting job, but can resurrect the design if necessary.
> Incidentally, during my limited testing at home, I found that the
> biggest determent to decent reception was all the switching power
> supply noise found around the house. I finally ended up using a
> battery power oscilloscope
> <http://802.11junk.com/jeffl/pics/drivel/slides/tek213.html>
> a gel cell for powering the RF amp, and turning off the main power to
> the house. Then, I could sorta see a signal.

Holy crap! That's a lot of trouble to see a signal. By "see" I assume
you mean on the scope. How large was the signal?

The place where I am working currently is not very close to much and
there isn't much in the house. I'm told the fridge is the biggest
source of noise. We'll see how the CFL lamps do.

Funny, last night my two RCC's both updated like they should. One is an
analog clock and runs at 8x speed to get the hour ahead. In the fall it
does this to go 11 hours ahead. Quite a sight! They both did the job,
but my PC didn't update until it had been on for awhile, without being
connected to the I'net.

>> They have a receiver not far from here
>> in Gaithersburg, MD and the signal is often strong during the day. So
>> much so that I don't follow why they say there is this day/night signal
>> strength fluctuation. It looks much more random to me.
>
> <http://tf.nist.gov/tf-cgi/wwvbgraph_e.cgi?5636103007>
> Very random. Compare the above graph with Santa Clara which looks
> less random:
> <http://tf.nist.gov/tf-cgi/wwvbgraph_e.cgi?5636105007>
>
> On the east coast, besides a weak signal, you also have the potential
> for 60KHz interference from the UK:
> <http://en.wikipedia.org/wiki/MSF_time_signal>

Loop antennas have a null that can be steered toward the source of
interference. I expect that will solve that problem...

> I had a 100KHz LORAN antenna on the roof of a former employer. The
> signal was just fine, until someone turned on the mercury vapor arc
> parking lot lamps at night. They were changed to low pressure sodium,
> which made testing possible at night.
>
> Incidentally, got any clue as to the vertical scale? My guess(tm) is
> 20 uv/meter signal strength per division, but I'm not sure.
>
>> The WWVB signal is not truly on-off keying. I believe they use a 10 dB
>> modulation factor for the AM signal. This is close to on-off I agree.
>
> It's now 17dB drop at the beginning of each UTC second. The change
> came in about 2008.
>
>> But they also phase modulate the signal and I will be demodulating both
>> to see which one works best in my design.
>
> The BPSK signal is much better at rejecting interference and digging
> the signal out of the noise. I don't know exactly how much, but I'm
> sure it's in a NIST publication somewhere.

That's for an ideal receiver. I have my limitations and I have no idea
how that will impact the reception.

>> The ADC in my design is truly one bit. It is an LVDS input on an FPGA.
>> I looked at delta-sigma (or is it sigma-delta? ;)
>
> It's delta-sigma.

Actually I always say that with a smiley as it can be either.

>> The loop antenna is rather large. I would like to end up with something
>> smaller. Once I get this working with a shielded loop antenna I will
>> check out the ferrite core antennas. My understanding is that they
>> don't produce as much signal.
>
> Not exactly. Small loopsticks receive a proportional amount of noise.
> The ratio of signal to atmospheric noise remains roughly the same
> within a fixed bandwidth for any antenna. That's why tiny little
> loopsticks, inside "atomic time" wristwatches work. The small
> loopsticks also use the magnetic field instead of the electric field,
> which is why they can be made so small.
> <http://en.wikipedia.org/wiki/Loop_antenna#Small_loops>

In my case I am not worried that the SNR isn't better, I just need a
strong enough signal to drive the LVDS input. I will be providing
feedback to eliminate any DC bias, but even that will only be so good.
The input is claimed to have no hysteresis, but even a tiny amount can
ruin this design. I will only know if this will work when I try it.

>>> As for bandwidth, the code is sent at 1 baud (1 bit/sec) which
>>> produces about a 2Hz occupied bandwidth. Therefore, the maximum Q of
>>> the antenna would need to be:
>>> 60Khz/ 2Hz = 30,000
>>> before the antenna bandwidth becomes a problem.
>>
>> I'm not sure how you came up with 2 Hz for the bandwidth. In this case
>> the bandwidth is not just twice the bit rate. I believe the stated
>> "system" bandwidth is around 5 Hz (from a 1995 paper prior to addition
>> of the phase modulation).
>
> Ok, I made a bad guess(tm). Even at 5Hz BW, the maximum Q of
> 60KHz / 5Hz = 12,000
> is not going to happen in a loop or loopstick antenna.
>
>> Even so, that is not the limiting factor. The limiting factor is the
>> difficulty in holding tune with drift in passive component values.
>
> Agreed.
>
>

--

Rick

263. Re: Coax question - are the "generic" versions of LMR-400 and LMR-400 Ultraflex as good as the "name brand" or is it not worth the savings?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-10 22:33:59 UTC
From: Bob <not@real.com>
Message-ID: <ia2qj8hmrdpoua2dk4iumlruf0puamjo6h@4ax.com>
Source record: 186

On 09 Mar 2013 10:33:58 GMT, Rob <nomail@example.com> wrote:

>Jef <jeff@assystems.com> wrote:
>>
>>> First look at the center
>>> conductor. The larger the beter as that is where most of the loss is. Solid
>>> wire will have slightly less loss, but if used with a rotator, it can flex
>>> enough to break over the years. Then look at the shield, especially the
>>> braid. It should be around 95% or beter. This is where the next loss is.
>>> Most of the low loss coax has a foil type shield plus 95% or beter braid.
>>> That applies for under 1000 Mhz anyway. Look at the velocity factor. The
>>> low loss will normally be .80 or higher.
>>
>> Just to point out that the diameter of the centre conductor is fixed by
>> the impedance of the coax, the outer diameter, and the dielectric
>> constant of the insulator. So for a cable that will fit in a PL259 or N
>> type it means that you will only have a very limited choice or inner
>> diameters that are dependant on the dielectric used, and that dielectric
>> is likely to have just as significant effect on loss as the diameter of
>> the inner, more as the frequency goes up. However, lower loss insulators
>> generally have a lower dielectric constant which also mean a larger
>> diameter inner, for a fixed outer diameter.
>>
>> Jeff
>
>Also, it needs to be pointed out that the original poster asked about
>differences in make of coax, while the discussion now focuses mainly
>on type of coax.
>
>Of course, that is a different topic. There are differences between
>types of coax (solid center vs stranded, solid dielectrum vs foam
>or air or helix or bamboo etc, foil shield vs braid or both), but
>what the OP asked is if an LMR-400 from one manufacturer is equal
>to an LMR-400 from another manufacturer.
>
>In that case, the diameters, insulation types, braid types etc should
>be the same and it is only thw manufacturing quality that would be
>different.
>
>However, always check. There always are manufacturers that try to
>get away with using less copper in the braid, for example. Copper
>is expensive these days.

Thanks to you, Ralph, and Jeff for your kind responses and some great information - just what I needed. I've a little more research to do, but I got the answers I was looking for, and more. I really appreciate it. This is a great group.

73, Bob KB2ZGN

264. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 01:25:09 UTC
From: Jim Mueller <wrongname@nospam.com>
Message-ID: <513d3275$0$7262$c3e8da3$b1356c67@news.astraweb.com>
Source record: 187
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Fri, 08 Mar 2013 16:51:57 -0500, rickman wrote:

> On 3/8/2013 4:30 PM, Tim Williams wrote:
>> "rickman"<gnuarm@gmail.com> wrote in message
>> news:khdkgglbg1@dont-email.me...
>>> Is this a current transformer or a voltage transformer?
>>> .--------. .--------.
>>> | | | |
>>> | C||C>
>>> VAC C||C> Load
>>> | C||C>
>>> | | | |
>>> `--------' `--------'
>>
>> Voltage. How about this?
>>
>>> .--------. .--------.
>>> | | | |
>>> | C||C>
>>> IAC C||C> Load
>>> | C||C>
>>> | | | |
>>> `--------' `--------'
>>
>> Tim
>>
>>
> I have to say I don't follow the distinction. It is a transformer, no?

The second one is a current transformer. They both consist of coils around a magnetic core driving some kind of load. The difference is the source of power and that causes them to behave very differently as well as being constructed differently.

Let's assume ideal components (a good place to start when learning a new concept). The voltage transformer is driven by a source that provides a constant voltage, no matter what the load. The transformer takes this voltage and converts it to some other voltage depending on the turns ratio; Vout = Vin * Ts / Tp. For example, if the primary has 100 turns and the secondary has 20 turns and the primary is supplied with 50 volts, the secondary will provide 10 volts. As the secondary load changes, this voltage remains the same but the current changes. If the secondary is open-circuited, the voltage still stays the same. If the secondary is short-circuited, the current becomes infinite; that's why real voltage

transformers are protected by fuses or similar devices.

Now for the current transformer, it is driven by a source that provides a constant current no matter what the load. The transformer takes this current and converts it to some other current depending on the turns ratio; Iout = Iin * Tp / Ts (note the inversion of the turns ratio). For example, if the primary has 1 turn (a common number for real transformers) and the secondary has 5 turns and the primary is supplied with 5 amps, the secondary will provide 1 amp. As the secondary load changes, this current remains the same but the voltage changes. If the secondary is short-circuited, the current still stays the same. If the secondary is open-circuited, the voltage becomes infinite; that's why real portable current transformers have a shorting switch on the secondary that the operator must close before disconnecting the load.

Also, note the difference in the number of turns, voltage transformers have a lot of turns and current transformers have few turns.

For a loop antenna with an external resonating capacitor, a voltage transformer would be connected in parallel with the loop and capacitor; all three in a parallel circuit. A current transformer would be connected in series with the antenna and capacitor so that the three form a series circuit. If the loop itself is used as the primary of the transformer and another winding is used as the secondary, the distinction between the two types is blurred. Also, a real antenna is neither a voltage source nor a current source but something in between.

--
Jim Mueller wrongname@nospam.com

To get my real email address, replace wrongname with dadoheadman.
Then replace nospam with fastmail. Lastly, replace com with us.

265. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 03:42:49 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <bjfqj8lcoqdtl2ufse5m51341ap6j1lt4i@4ax.com>
Source record: 188
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 10 Mar 2013 17:09:45 -0400, rickman <gnuarm@gmail.com> wrote:

>On 3/10/2013 1:32 AM, Jeff Liebermann wrote:

>Holy crap! That's a lot of trouble to see a signal. By "see" I assume
>you mean on the scope. How large was the signal?

Turning off the house was easier than finding the multiple sources of
noise at 60KHz. What drove me nuts for about an hour was that much of
the noise was coming from my bench oscilloscope. Argh.

This is typical. WWVH through an active preamp showing the effect of
power line noise (probably from attached switching power supplies).
<http://www.prc68.com/I/Images/AMRAD110.GIF>
and after adding some better line filtering:
<http://www.prc68.com/I/Images/AMRAD_BT.GIF>
Main page:
<http://www.prc68.com/I/LF-Ant.shtml>

I didn't log the setup or take pictures. So, let's do the math and
guesswork.
<http://vk1od.net/calc/FS2RPCalc.htm>
I plugged in some guesses and recollections as to what the antenna
(Q=30) and amp (+20dB gain) were doing and got:
<http://802.11junk.com/jeffl/crud/WWVH-rx-signal-estimate.jpg>
-15.8dBm or about 36mv into 50 ohms. I amplified this about 20dB with
two or three U310 JFET's (I forgot what I did) to about 3V rms on the
scope. I didn't bother with the 50 ohm to scope input Z conversion.
Most of what I saw was noise, noise, and more noise. However, if I
was patient, I could see the data fade in an out. As I vaguely
recall, it was less than 1 division or about 0.1v change.

>The place where I am working currently is not very close to much and
>there isn't much in the house. I'm told the fridge is the biggest
>source of noise. We'll see how the CFL lamps do.

Sigh. Most of what I found at 60KHz was coming from lightning storms
over Florida. The local sources were all switching power supplies,
including those in my test equipment. I didn't have an CFL or LED
room lights at the time. I've recently found them to be a rather
nasty noise source. Also, the switching power supply wall warts were
rather awful. My standard test is to fire up my antique IC-735 HF
xceiver, attach a long length of RG-58c/u to the antenna with a
resonant loop at the end, tune it to 100KHz (as low as it will go),
and sniff around the house.

What you'll see on a spectrum analyzer.
<http://www.prc68.com/I/Spec_0002.shtml>
If you're thinking of removing all that junk with a 5Hz wide digital filter in software, please note that you'll need to have the input A/D handle the total power of almost all that junk. Also, the amplifier that you're trying to avoid between the antenna and A/D will also need to be rather linear, and therefore rather high power, in order to avoid producing more spurious junk via intermodulation products.

>Funny, last night my two RCC's both updated like they should. One is an
>analog clock and runs at 8x speed to get the hour ahead. In the fall it
>does this to go 11 hours ahead. Quite a sight! They both did the job,
>but my PC didn't update until it had been on for awhile, without being
>connected to the I'net.

So that's how they change daylight savings time. If I had known, I would have stayed and watched. Thanks for the tip.

>> On the east coast, besides a weak signal, you also have the potential
>> for 60KHz interference from the UK:
>> <http://en.wikipedia.org/wiki/MSF_time_signal>
>
>Loop antennas have a null that can be steered toward the source of
>interference. I expect that will solve that problem...

The depth of the notch seems to be less as the antenna shrinks in size. I'm not sure about this as I haven't attempted to recently model a 60KHz magnetic loop with 4NEC2, but that's what my tinkering shows. If there were a deep notch, most of the home "atomic clock" receivers would be orientation sensitive and I would expect warnings in the docs.

>> The BPSK signal is much better at rejecting interference and digging
>> the signal out of the noise. I don't know exactly how much, but I'm
>> sure it's in a NIST publication somewhere.
>
>That's for an ideal receiver. I have my limitations and I have no idea
>how that will impact the reception.

Well, you have to start somewhere, and an ideal receiver is a good place to start. The advantage is that reality only makes everything worse, never better. You should be able to build the BPSK demodulator, and then use a PC to decode the data. I've seen several such programs that do not require I/Q outputs. Here's one based on FreeBSD intended to sync the system clock to WWV/WWVH:
<http://docs.freebsd.org/doc/4.0-RELEASE/usr/share/doc/ntp/driver36.htm>
I'm sure there are others.

>In my case I am not worried that the SNR isn't better, I just need a
>strong enough signal to drive the LVDS input.

Gain at 60KHz is very cheap. Watch out for overload issues. If you design it to work at full scale with whatever you get at 50uV/m, and the signal climbs to 100uV/m, your input A/D isn't going to be very

happy. AGC will help, but I don't think it will be needed if you calculate your signal levels so that the A/D input amp isn't clipping.

Out of service for a day. It seems that about 30 years of chemistry experiments has finally destroyed much of the kitchen sink plumbing. I hate plumbing.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

266. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 09:54:28 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkjraek.etc.nomail@xs8.xs4all.nl>
Source record: 189
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

rickman <gnuarm@gmail.com> wrote:
> Funny, last night my two RCC's both updated like they should. One is an
> analog clock and runs at 8x speed to get the hour ahead. In the fall it
> does this to go 11 hours ahead. Quite a sight! They both did the job,
> but my PC didn't update until it had been on for awhile, without being
> connected to the I'net.

In Europe we have DCF-77 which is at 77.5 kHz.
The trouble receiving it is similar to WWVB.
I have several clocks in the house but some of them have only very
weak sync. Also, to save battery they only sync once every 12 hours
or so. At DST change, they may display the wrong time for a couple
of days, especially the one in the kitchen. I need to relocate it
to a place where I know there is better signal.

The problem is (harmonics of) switching power supplies here as well.
Once I had a big open-frame SMPS that I used to power my radio equipment
and that switched around 25 kHz. Under the right circumstances, the
3rd harmonic wiped away all DCF-77 receiving within 5 meters or so.
Old CRT computer monitors also were problematic.

I presume you have some specific needs, low power being among them,
to stay focussed on WWVB for your clock sync. Most computer users
would use GPS now, or simply sync via the internet. GPS has a different
receiving conditions problem, but at least it isn't so much affected
by prominently present local interference.

Of course a GPS receiver requires a lot more power than a WWVB receiver,
although this has come down over the years. Using some sort of on/off
switching (syncing with the received time and then having it run free
for some time) may help a bit, the battery powered radio clocks do
that as well.

267. Re: Wave propagation on wire surface

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 12:57:34 UTC
From: bilou <padepub@free.fr>
Message-ID: <513dd4c4$0$2279$426a74cc@news.free.fr>
Source record: 190

"Antonio I0JX" <vernucci@tin.it> wrote in message
news:513b98d0$0$26774$4fafbaef@reader2.news.tin.it...
> Please your opinion on the subject tecnology:
> http://www.corridorsystems.com/Technology.html
Too good to be true.
The old Goubau line without it's drawbacks.
A much more practical article from the amateur community is here:
http://www.neazoi.com/arrl/7406011.pdf
73's

268. Re: Wave propagation on wire surface

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 15:43:24 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <b1d80$513df98e$5353a19c$3914@cache50.multikabel.net>
Source record: 191

El 09-03-13 22:28, Antonio I0JX escribiï¿½:
> "Ralph Mowery" ha scritto nel messaggio
> news:M8-dnRhRyqopBqbMnZ2dnUVZ_qudnZ2d@earthlink.com...
>
> They call it new, but it has been around for about 60 years. Most
> often called a G-line.
>
> http://www.toddsatogata.net/BIW12Prelim/papers/tupg007.pdf
>
> If you do not have any bends in the line and the launchers are
> correct, it is suspose to be low loss.
>
>
>
> They call it "H-line" opposite to the old Goubau "G-line".
>
> In the paper you cited I read: "The principle is based on
> non-radiating surface waves which are bound to the wire due to surface
> imperfections, e.g. a dielectric layer which can be a simple
> isolation." So it would seem that, without a dielectric, the system
> would not properly work.
>
> Corridor systems instead claims that their H-line works with bare wire
> too.
>
> 73
>
> Tony I0JX
>

As far as I can see, nothing new here.

The trick to low radiation loss is a relative thin line with a propagation velocity less then c. When the line is too thin, ohmic loss may win at long lines. The cheapest way to get Vph < c is a dielectric layer.

When the propagation velocity is (close to) c (so no dielectric layer), the radiation loss increases, but it can still be useful for certain applications.

--
Wim
PA3DJS
www.tetech.nl

Please remove abc first in case of PM

269. Re: Wave propagation on wire surface

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 21:24:33 UTC
From: Antonio I0JX <vernucci@tin.it>
Message-ID: <513e4b91$0$26776$4fafbaef@reader2.news.tin.it>
Source record: 192

"bilou" ha scritto nel messaggio
news:513dd4c4$0$2279$426a74cc@news.free.fr...

"Antonio I0JX" <vernucci@tin.it> wrote in message
news:513b98d0$0$26774$4fafbaef@reader2.news.tin.it...
> Please your opinion on the subject tecnology:
> http://www.corridorsystems.com/Technology.html
Too good to be true.
The old Goubau line without it's drawbacks.
A much more practical article from the amateur community is here:
http://www.neazoi.com/arrl/7406011.pdf
73's

Tnx for the link.

BTW there is a fairly long and detailed article regarding the H-line (i.e.
the G-line without dielectric) on the latest issue of QEX magazine.

73

Tony I0JX

270. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 21:29:28 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khli9i$2r4$1@dont-email.me>
Source record: 193
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

```
On 3/10/2013 9:25 PM, Jim Mueller wrote:
> On Fri, 08 Mar 2013 16:51:57 -0500, rickman wrote:
>
>> On 3/8/2013 4:30 PM, Tim Williams wrote:
>>> "rickman"<gnuarm@gmail.com> wrote in message
>>> news:khdkgg$lbg$1@dont-email.me...
>>>> Is this a current transformer or a voltage transformer?
>>>> .--------. .--------.
>>>> | | | |
>>>> | C||C>
>>>> VAC C||C> Load
>>>> | C||C>
>>>> | | | |
>>>> `--------' `--------'
>>>
>>> Voltage. How about this?
>>>
>>>> .--------. .--------.
>>>> | | | |
>>>> | C||C>
>>>> IAC C||C> Load
>>>> | C||C>
>>>> | | | |
>>>> `--------' `--------'
>>>
>>> Tim
>>>
>>>
>> I have to say I don't follow the distinction. It is a transformer, no?
>
> The second one is a current transformer. They both consist of coils
> around a magnetic core driving some kind of load. The difference is the
> source of power and that causes them to behave very differently as well
> as being constructed differently.

I can't say I understand the distinction.

> Let's assume ideal components (a good place to start when learning a new
> concept). The voltage transformer is driven by a source that provides a
> constant voltage, no matter what the load. The transformer takes this
> voltage and converts it to some other voltage depending on the turns
> ratio; Vout = Vin * Ts / Tp. For example, if the primary has 100 turns
> and the secondary has 20 turns and the primary is supplied with 50 volts,
> the secondary will provide 10 volts. As the secondary load changes, this
```

> voltage remains the same but the current changes. If the secondary is
> open-circuited, the voltage still stays the same. If the secondary is
> short-circuited, the current becomes infinite; that's why real voltage
> transformers are protected by fuses or similar devices.

This is ok so far.

> Now for the current transformer, it is driven by a source that provides a
> constant current no matter what the load. The transformer takes this
> current and converts it to some other current depending on the turns
> ratio; Iout = Iin * Tp / Ts (note the inversion of the turns ratio).
> For example, if the primary has 1 turn (a common number for real
> transformers) and the secondary has 5 turns and the primary is supplied
> with 5 amps, the secondary will provide 1 amp. As the secondary load
> changes, this current remains the same but the voltage changes. If the
> secondary is short-circuited, the current still stays the same. If the
> secondary is open-circuited, the voltage becomes infinite; that's why
> real portable current transformers have a shorting switch on the
> secondary that the operator must close before disconnecting the load.

I don't follow how any of this has to do with a difference in the
transformers. Bth transformers obey both equations you have presented.
Both transformers change the voltage as well as the current, no?

> Also, note the difference in the number of turns, voltage transformers
> have a lot of turns and current transformers have few turns.

I don't see how this follows from what you have written. What is there
about these two transformers that define the number of turns? The
current transformers I am interested in using use 100 or 300 turns. Is
that a lot or just a few?

> For a loop antenna with an external resonating capacitor, a voltage
> transformer would be connected in parallel with the loop and capacitor;
> all three in a parallel circuit. A current transformer would be
> connected in series with the antenna and capacitor so that the three form
> a series circuit. If the loop itself is used as the primary of the
> transformer and another winding is used as the secondary, the distinction
> between the two types is blurred. Also, a real antenna is neither a
> voltage source nor a current source but something in between.

What I have gotten from this is that Tim's original usage of the terms
implies how the transformer is connected to the antenna. As you say, a
voltage transformer will be connected across the coil in parallel with
the capacitor and a current transformer will be connected in series with
the antenna and capacitor.

I was planning to use the antenna wire itself in the middle of the
antenna loop as the primary of the transformer. So I guess that will be
a current transformer. I may try a simulation to see just what happens
with a parallel connection.

--

Rick

271. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 22:10:23 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khlkm1$f80$1@dont-email.me>
Source record: 194
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/10/2013 11:42 PM, Jeff Liebermann wrote:
> On Sun, 10 Mar 2013 17:09:45 -0400, rickman<gnuarm@gmail.com> wrote:
>
>> On 3/10/2013 1:32 AM, Jeff Liebermann wrote:
>
>> Holy crap! That's a lot of trouble to see a signal. By "see" I assume
>> you mean on the scope. How large was the signal?
>
> Turning off the house was easier than finding the multiple sources of
> noise at 60KHz. What drove me nuts for about an hour was that much of
> the noise was coming from my bench oscilloscope. Argh.

Yes, like I said, not much in this house and there is not much near it. I have a laptop and my roommate (when he is here) uses one along with an iPhone. I suppose they might generate some noise, but he turns off his laptop at night I'm sure. Otherwise, there just isn't much in the house that isn't 10 or 15 years old. I have a car radio on a linear regulator and an electric shaver that sits charging (part of the time). Otherwise it should be pretty quiet electrically here.

> This is typical. WWVH through an active preamp showing the effect of
> power line noise (probably from attached switching power supplies).
> <http://www.prc68.com/I/Images/AMRAD110.GIF>
> and after adding some better line filtering:
> <http://www.prc68.com/I/Images/AMRAD_BT.GIF>
> Main page:
> <http://www.prc68.com/I/LF-Ant.shtml>
>
> I didn't log the setup or take pictures. So, let's do the math and
> guesswork.
> <http://vk1od.net/calc/FS2RPCalc.htm>
> I plugged in some guesses and recollections as to what the antenna
> (Q=30) and amp (+20dB gain) were doing and got:
> <http://802.11junk.com/jeffl/crud/WWVH-rx-signal-estimate.jpg>
> -15.8dBm or about 36mv into 50 ohms. I amplified this about 20dB with
> two or three U310 JFET's (I forgot what I did) to about 3V rms on the
> scope. I didn't bother with the 50 ohm to scope input Z conversion.
> Most of what I saw was noise, noise, and more noise. However, if I
> was patient, I could see the data fade in an out. As I vaguely
> recall, it was less than 1 division or about 0.1v change.

I'm not sure why you used 1900 meters for the distance. I also don't get why you used 5 ohms for the receiver input impedance.

>> The place where I am working currently is not very close to much and
>> there isn't much in the house. I'm told the fridge is the biggest
>> source of noise. We'll see how the CFL lamps do.
>
> Sigh. Most of what I found at 60KHz was coming from lightning storms
> over Florida. The local sources were all switching power supplies,
> including those in my test equipment. I didn't have an CFL or LED
> room lights at the time. I've recently found them to be a rather
> nasty noise source. Also, the switching power supply wall warts were
> rather awful. My standard test is to fire up my antique IC-735 HF
> xceiver, attach a long length of RG-58c/u to the antenna with a
> resonant loop at the end, tune it to 100KHz (as low as it will go),
> and sniff around the house.

There's just not much of that in this house.

> What you'll see on a spectrum analyzer.
> <http://www.prc68.com/I/Spec_0002.shtml>
> If you're thinking of removing all that junk with a 5Hz wide digital
> filter in software, please note that you'll need to have the input A/D
> handle the total power of almost all that junk. Also, the amplifier
> that you're trying to avoid between the antenna and A/D will also need
> to be rather linear, and therefore rather high power, in order to
> avoid producing more spurious junk via intermodulation products.

What A/D? Oh, you mean the LVDS input. How do you saturate a 1 bit ADC?

>> Funny, last night my two RCC's both updated like they should. One is an
>> analog clock and runs at 8x speed to get the hour ahead. In the fall it
>> does this to go 11 hours ahead. Quite a sight! They both did the job,
>> but my PC didn't update until it had been on for awhile, without being
>> connected to the I'net.
>
> So that's how they change daylight savings time. If I had known, I
> would have stayed and watched. Thanks for the tip.
>
>>> On the east coast, besides a weak signal, you also have the potential
>>> for 60KHz interference from the UK:
>>> <http://en.wikipedia.org/wiki/MSF_time_signal>
>>
>> Loop antennas have a null that can be steered toward the source of
>> interference. I expect that will solve that problem...
>
> The depth of the notch seems to be less as the antenna shrinks in
> size. I'm not sure about this as I haven't attempted to recently
> model a 60KHz magnetic loop with 4NEC2, but that's what my tinkering
> shows. If there were a deep notch, most of the home "atomic clock"
> receivers would be orientation sensitive and I would expect warnings
> in the docs.

I wouldn't say the *depth* of the null depends on the size of the loop.
I think it is a null with a Q, much like a resonance peak, but a null
of course. The smaller the loop, the sharper the null like a high Q

resonance, so the orientation becomes very critical. In theory at
least, the null is perfect, 0 signal.

>>> The BPSK signal is much better at rejecting interference and digging
>>> the signal out of the noise. I don't know exactly how much, but I'm
>>> sure it's in a NIST publication somewhere.
>>
>> That's for an ideal receiver. I have my limitations and I have no idea
>> how that will impact the reception.
>
> Well, you have to start somewhere, and an ideal receiver is a good
> place to start. The advantage is that reality only makes everything
> worse, never better. You should be able to build the BPSK
> demodulator, and then use a PC to decode the data. I've seen several
> such programs that do not require I/Q outputs. Here's one based on
> FreeBSD intended to sync the system clock to WWV/WWVH:
> <http://docs.freebsd.org/doc/4.0-RELEASE/usr/share/doc/ntp/driver36.htm>
> I'm sure there are others.

PC?!!! We don't need no stinking PCs! The demodulator is simple. The
signal is beat with a quadrature reference which will bring it down to 0
Hz. This gives two values, a sin and a cos signal. Take the ratio and
do an arcTan. This is a simple table lookup made simpler by some
convenient math relations. For example, the table only needs to cover
0ï¿½ to 45ï¿½ since the ratio can be swapped for 45ï¿½ to 90ï¿½ and the other
three quadrants distinguished by the sign bits.

Some folks would like you to think this has to be done like a high
fidelity receiver, but it only has to pull the signal out of the noise.

>> In my case I am not worried that the SNR isn't better, I just need a
>> strong enough signal to drive the LVDS input.
>
> Gain at 60KHz is very cheap. Watch out for overload issues. If you
> design it to work at full scale with whatever you get at 50uV/m, and
> the signal climbs to 100uV/m, your input A/D isn't going to be very
> happy. AGC will help, but I don't think it will be needed if you
> calculate your signal levels so that the A/D input amp isn't clipping.

If this is *signal* strength then it won't matter. If this is noise you
are talking about, I'm not sure it will be a problem, the signal will
still be able to be dug out with enough processing gain.

> Out of service for a day. It seems that about 30 years of chemistry
> experiments has finally destroyed much of the kitchen sink plumbing. I
> hate plumbing.

Not much fun, but then what it if you have to work on your knees and get
dirty? I don't enjoy working on my car anymore either.

--

Rick

272. Re: Anyone here use an Ultimax100 end fed antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-11 23:09:16 UTC
From: wxviewer <wxviewer@comcast.net>
Message-ID: <b20a998c-a293-4e40-a5bc-e63bc306950b@googlegroups.com>
Source record: 195

On Friday, February 22, 2013 8:02:39 PM UTC-5, Bob wrote:
> I purchased an Ultimax100 end fed antenna, and am curious if anyone here has
>
> used one before and if you have any advice on the best orientation for it,
>
> horizontal, vertical, or slope? I checked eHam.net for reviews and they were
>
> favorable, 4+'s and 5's.
>
>
>
> Thanks,
>
> Bob KB2ZGN

I personally know 3 hams that use the same end fed as you and have been having incredible results. In addition they are using the FT-950 and LDG AT-100 tuner and have been racking up the contact. Me on the other hand am using the ZS6BKW dipole and have found good success as well.

Bob-WX2I

273. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-12 00:32:23 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <khlt0e$r78$1@dont-email.me>
Source record: 196
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 3/11/2013 5:54 AM, Rob wrote:
> rickman<gnuarm@gmail.com> wrote:
>> Funny, last night my two RCC's both updated like they should. One is an
>> analog clock and runs at 8x speed to get the hour ahead. In the fall it
>> does this to go 11 hours ahead. Quite a sight! They both did the job,
>> but my PC didn't update until it had been on for awhile, without being
>> connected to the I'net.
>
> In Europe we have DCF-77 which is at 77.5 kHz.
> The trouble receiving it is similar to WWVB.
> I have several clocks in the house but some of them have only very
> weak sync. Also, to save battery they only sync once every 12 hours
> or so. At DST change, they may display the wrong time for a couple
> of days, especially the one in the kitchen. I need to relocate it
> to a place where I know there is better signal.

Yes, noise can be a problem I understand. I am hoping to get the
bandwidth down much more than most receivers so the noise won't be so
big a factor. With a signal bandwidth of a handful of Hz, it should be
possible.

> The problem is (harmonics of) switching power supplies here as well.
> Once I had a big open-frame SMPS that I used to power my radio equipment
> and that switched around 25 kHz. Under the right circumstances, the
> 3rd harmonic wiped away all DCF-77 receiving within 5 meters or so.
> Old CRT computer monitors also were problematic.
>
> I presume you have some specific needs, low power being among them,
> to stay focussed on WWVB for your clock sync. Most computer users
> would use GPS now, or simply sync via the internet. GPS has a different
> receiving conditions problem, but at least it isn't so much affected
> by prominently present local interference.

Yes, this is actually a demo to illustrate how low power an FPGA can be.
An FPGA will run both the clock and the receiver and use power from
the environment rather than batteries.

> Of course a GPS receiver requires a lot more power than a WWVB receiver,
> although this has come down over the years. Using some sort of on/off
> switching (syncing with the received time and then having it run free
> for some time) may help a bit, the battery powered radio clocks do
> that as well.

Yes, the receiver itself only has to run part of the time, >10% perhaps.
The clock has to run 100% obviously. Interesting enough, the FPGA has

a base power consumption (0 Hz) of nearly 50% of the power budget and I am confident it will still make the goal.

--

Rick

274. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-12 01:21:22 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <cfvsj8lnrhu21sqqt74u12pjk1oast4b40@4ax.com>
Source record: 197
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 11 Mar 2013 18:10:23 -0400, rickman <gnuarm@gmail.com> wrote:

>> So, let's do the math and
>> guesswork.
>> <http://vk1od.net/calc/FS2RPCalc.htm>
>> I plugged in some guesses and recollections as to what the antenna
>> (Q=30) and amp (+20dB gain) were doing and got:
>> <http://802.11junk.com/jeffl/crud/WWVH-rx-signal-estimate.jpg>
>> -15.8dBm or about 36mv into 50 ohms. I amplified this about 20dB with
>> two or three U310 JFET's (I forgot what I did) to about 3V rms on the
>> scope. I didn't bother with the 50 ohm to scope input Z conversion.
>> Most of what I saw was noise, noise, and more noise. However, if I
>> was patient, I could see the data fade in an out. As I vaguely
>> recall, it was less than 1 division or about 0.1v change.
>
>I'm not sure why you used 1900 meters for the distance. I also don't
>get why you used 5 ohms for the receiver input impedance.

(Quick reply... still working on my expanding plumbing problem).

The 1900 meters is because I screwed up. It should be about 1900Km
from San Francisco to Denver. However, any distance greater than zero
will suffice for this calculation. The controlling numbers are the
100uV/m field strength, the -3dB antenna gain, and the receiver
bandwidth (5Hz). All of the other numbers can change without having
any effect on the recovered power. The 5 ohms rx input Z was because
the original antenna that I used, was a base loaded 100ft "whip"
antenna with a rather impedance. I couldn't decide if the field
strength to receive power form wanted the antenna impedance before the
50 ohm matching network, or if it treated the matching as part of the
antenna. I flipped a coin and chose 5 ohms. I guess for a loop,
100-200 ohms would be more appropriate. Again, the value makes no
difference in the calculations.

(Back to plumbing and fixing the 48" farm jack that my neighbor
borrowed and returned looking like a pretzel).

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

275. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-12 01:44:41 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <OvudnQ07bLcXFaPMnZ2dnUVZ_o2dnZ2d@earthlink.com>
Source record: 198
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jeff Liebermann wrote:
>
> (Back to plumbing and fixing the 48" farm jack that my neighbor
> borrowed and returned looking like a pretzel).

It sounds like your neighbor doesn't know jacks. ;-)

276. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-12 02:28:17 UTC
From: Michael Black <et472@ncf.ca>
Message-ID: <alpine.LNX.2.02.1303112217340.5650@darkstar.example.org>
Source record: 199
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 11 Mar 2013, rickman wrote:

> Yes, this is actually a demo to illustrate how low power an FPGA can be. An
> FPGA will run both the clock and the receiver and use power from the
> environment rather than batteries.
>
But this is all relative. My first "atomic clock" ran on the same set of AA batteries for five or six year, and the second set is now four years old. The Centrios "atomic" wall clock (digital) uses one AA battery, I'm not sure how long that's been in. My watch is a Casio Waveceptor, 3 or 4 years old, which has a solar cell to refresh the battery and it's never been less than fully charged.

Fice or six years seems almost as good as 'shelf life" and while I had a small LCD clock (not "atomic") that seemed to run a long time on an AA cell, I'm not sure it was all that lower current than the 'atomic clock".

I'm more impressed by the clock running off 1.5v than that the batteries last reasonably long.

These things are amazing, considering the effort people used to put into making WWVB receivers, admittedly the "atomic clock" craze has very much benefitted from the power increase at the station.

I do orient them, but here in Montreal it's the rare night that they don't sync up, and I don't think since I've had more than one that they all miss the sync.

Michael

277. Re: Antenna Simulation in LTspice

Newsgroup: rec.radio.amateur.antenna
Date: 2013-03-13 00:00:54 UTC
From: Jim Mueller <wrongname@nospam.com>
Message-ID: <513fc1b6$0$54939$c3e8da3$e408f015@news.astraweb.com>
Source record: 200
Cross-posted to: sci.electronics.design,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 11 Mar 2013 07:41:41 +0000, Jef wrote:

>> The second one is a current transformer. They both consist of coils
>> around a magnetic core driving some kind of load. The difference is
>> the source of power and that causes them to behave very differently as
>> well as being constructed differently.
>
>
> What you are describing is a difference in the source NOT a difference
> in the transformer!
>
> The transformer behaves exactly the same in both cases, the inversion is
> merely down to ohms law.
>
> A transformer is a transformer. The only time it gets tricky is when the
> core and saturation etc etc comes into play.
>
> Jeff

Very true. A transformer is a transformer and all obey the same equations. But that doesn't prevent real transformers from being called voltage or current transformers. And it doesn't prevent them from being constructed differently or their outputs behaving differently.

Part of the problem is that real-world AC current sources are rather rare. So current transformers are seldom connected as shown in the example that was given. They are usually connected in series between a voltage source and some other load, frequently for the purpose of measuring the current. This is what gives rise to the different constructions.

Voltage transformers have to withstand the source voltage across their primaries so they have to have enough turns to prevent the core from saturating. The actual number of turns depends on the voltage, frequency, and core size and material.

Current transformers are generally constructed to have minimum primary voltage drop so they have few turns on the primary, frequently only one. Considerations of frequency, core size and material still apply, of course. The differences in the name and construction are determined by the intended use. Many current transformers consist of a secondary winding on a toroidal core. The primary is supplied by the user by passing a wire through the hole in the core; thus, one turn.

For a loop antenna with a secondary, there is voltage across the antenna winding and current through it. Which is the secondary responding to? The current, since this is what produces the magnetic field. But, since this current is flowing through some number of turns and developing a voltage, it could also be considered a voltage transformer, which is why I said the distinction is blurred.

--
Jim Mueller wrongname@nospam.com

To get my real email address, replace wrongname with dadoheadman.
Then replace nospam with fastmail. Lastly, replace com with us.

278. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-29 17:41:19 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <vun25a-eaj.ln1@mail.specsol.com>
Source record: 51

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> U?ytkownik "Rob" <nomail@example.com> napisa? w wiadomo?ci
> news:slrnknsglr.n8c.nomail@xs8.xs4all.nl...
>> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>> The radial connected with the shield of the coax is the ground.
>>
>> No Szczepan!
>> You keep saying that, but it is wrong.
>
> Not me but Wiki:
> "The monopole antenna was invented in 1895 by radio pioneer Guglielmo
> Marconi, who discovered if he attached one terminal of his transmitter to a
> wire suspended in the air and the other to the Earth, he could transmit for
> longer distances. For this reason it is sometimes called a Marconi antenna.
> Common types of monopole antenna are the whip, rubber ducky, helical, random
> wire, inverted-L and T-antenna, mast radiator, and ground plane antennas."

This is true but you have no clue what it means as demonstrated by your
babbling gibberish.

>> When a coax shield is grounded at one end, and after a considerable
>> length of coax it is connected at the dipole, the shield at that
>> end is no longer ground.
>>
>> Especially when the length of the coax is about a quarter wavelength,
>> it will have nothing to do with ground.
>
> The "ground plane antenna" is also the monopole:
> "To function as a ground plane, the conducting surface must be at least a
> quarter of the wavelength (?/4) of the radio waves in size. In lower
> frequency antennas, such as the mast radiators used for broadcast antennas,
> the Earth itself (or a body of water such as a salt marsh or ocean) is used
> as a ground plane. For higher frequency antennas, in the VHF or UHF range,
> the ground plane can be smaller, and metal disks, screens or wires are used
> as ground planes".

This is true but you have no clue what it means as demonstrated by your
babbling gibberish.

> For radioamateurs the one wire is enough.
> The dipole is useless for them. They want to "transmit for longer
> distances".
>
> But some radioameteurs use the receiving dipole to find the source of
```

> radiation.
> S*

And all your comments are again babbling gibberish that shows you have absolutely no understanding of anything you have read.

--
Jim Pennino

279. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 03:20:18 UTC
From: tom <news4792@taring.org>
Message-ID: <ltCdnZefQcfvpeLMnZ2dnUVZ_ridnZ2d@iphouse.net>
Source record: 52

On 4/29/2013 3:50 AM, Szczepan Bialek wrote:
> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>> The radial is in line with the monopole. Everything is ungrounded.
>
> The radial connected with the shield of the coax is the ground.

So what would happen if I connected my transmitter, which has a 50 ohm
{ostensibly) output with the hot lead of the coax connected to the
"radial" instead of the "monopole" and similarly with the braid?

Think long about this.

tom
K0TAR

280. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 03:23:24 UTC
From: tom <news4792@taring.org>
Message-ID: <ltCdnZafQce2pOLMnZ2dnUVZ_ridnZ2d@iphouse.net>
Source record: 53

On 4/29/2013 10:20 PM, tom wrote:
> On 4/29/2013 3:50 AM, Szczepan Bialek wrote:
>> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
>>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>>> The radial is in line with the monopole. Everything is ungrounded.
>>
>> The radial connected with the shield of the coax is the ground.
>
> So what would happen if I connected my transmitter, which has a 50 ohm
> {ostensibly) output with the hot lead of the coax connected to the
> "radial" instead of the "monopole" and similarly with the braid?
>
> Think long about this.
>
> tom
> K0TAR
>
>
>

Just to clearly understand where you are on how this really works.

tom
K0TAR

281. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 07:40:25 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <517f7570$0$26683$65785112@news.neostrada.pl>
Source record: 54

"Ian" <no-spam-please@I-am-Veggie.org> napisa&#65533; w wiadomo&#65533;ci
news:klm9mv$78c$1@speranza.aioe.org...
> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
> news:517ea2e2$0$1269$65785112@news.neostrada.pl...
>> Not me but Wiki:
>> "The monopole antenna was invented ...
>> For radioamateurs the one wire is enough. The dipole is useless for them.
>> They want to "transmit for longer distances".
>>
>> S*
>
> Hello old chap.
>
> There is surely no point in posting quotations from Wiki if you do not
> understand them.
> The comment about dipoles being useless for amateurs is definitely
> incorrect. The dipole is a very popular design of antenna for amateur
> radio
> use.

Do you mean the dipoles fed by the coax or by the ladder line?
S*

282. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 07:48:58 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <517f776d$0$1225$65785112@news.neostrada.pl>
Source record: 55

"Rob" <nomail@example.com> napisa&#65533; w wiadomo&#65533;ci
news:slrnknta1h.spb.nomail@xs8.xs4all.nl...
> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>> The "ground plane antenna" is also the monopole:
>> "To function as a ground plane, the conducting surface must be at least a
>> quarter of the wavelength (?/4) of the radio waves in size. In lower
>> frequency antennas, such as the mast radiators used for broadcast
>> antennas,
>> the Earth itself (or a body of water such as a salt marsh or ocean) is
>> used
>> as a ground plane. For higher frequency antennas, in the VHF or UHF
>> range,
>> the ground plane can be smaller, and metal disks, screens or wires are
>> used
>> as ground planes".
>
> Note that it does not say that it is sufficient to connect one side
> of the antenna to the ground with a wire.

Note what Marconi did: "Marconi, who discovered if he attached one terminal
of his transmitter to a
wire suspended in the air and the other to the Earth, he could transmit for
longer distances."

> A ground plane is something different than a wire to ground.

The nonactive leg of the popular "dipole" is connected with the braid of a
coax and the mass (chassis) of the transmitter.
The braid has many wires. Each of them is the radial.
S*

283. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 08:00:35 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnknuuh3.spb.nomail@xs8.xs4all.nl>
Source record: 56

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> "Rob" <nomail@example.com> napisa³ w wiadomo¶ci
> news:slrnknta1h.spb.nomail@xs8.xs4all.nl...
>> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>> The "ground plane antenna" is also the monopole:
>>> "To function as a ground plane, the conducting surface must be at least a
>>> quarter of the wavelength (?/4) of the radio waves in size. In lower
>>> frequency antennas, such as the mast radiators used for broadcast
>>> antennas,
>>> the Earth itself (or a body of water such as a salt marsh or ocean) is
>>> used
>>> as a ground plane. For higher frequency antennas, in the VHF or UHF
>>> range,
>>> the ground plane can be smaller, and metal disks, screens or wires are
>>> used
>>> as ground planes".
>>
>> Note that it does not say that it is sufficient to connect one side
>> of the antenna to the ground with a wire.
>
> Note what Marconi did: "Marconi, who discovered if he attached one terminal
> of his transmitter to a
> wire suspended in the air and the other to the Earth, he could transmit for
> longer distances."

Marconi was using low frequencies where the wavelength is so long that
his wires are comparatively short.

At frequencies where amateurs operate, the wavelength is comparable
to the length of the feedline and it no longer works like that.

>> A ground plane is something different than a wire to ground.
>
> The nonactive leg of the popular "dipole" is connected with the braid of a
> coax and the mass (chassis) of the transmitter.
> The braid has many wires. Each of them is the radial.
> S*

It does not work like that.
A quarter wave radial works because when one end is floating the other
end has a low impedance.
```

284. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 08:08:45 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <517f7c10$0$1217$65785112@news.neostrada.pl>
Source record: 57

```
"Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
news:klmb1j$4f8$1@dont-email.me...
>
>
> "Szczepan Bialek" wrote in message
> news:517e345a$0$26694$65785112@news.neostrada.pl...
>
>
> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
> news:klk0ip$qdg$1@dont-email.me...
>>
>>
>> "Szczepan Bialek" wrote in message
>> news:517cd721$0$1227$65785112@news.neostrada.pl...
>>
>>
>>>>> On Friday, April 26, 2013 12:38:06 PM UTC-5, Irv Finkleman wrote:
>>> <snip>
>>>>>
>>>>> Maybe SB can explain the difference between a monopole with a single
>>>>> ungrounded radial, and a dipole.
>>>
>>>>Each radial, grounded or not (but connected to the shield of the coax),
>>>>is the ground.
>>>>The Earth, the Moon, a satelite and each piece of conductor is ground
>>>>for antennas. Radial is one of them.
>>>>Ground must be adequate to kW.
>>>
>>> What if the single ungrounded quarter wave radial is in line with the
>>> quarter wave radiator?
>>> Is it still a monopole?
>>
>> # Of course.
>>
>> Wow...you gave a lot to digest.
>>
>> Just to understand the discussion, let's address the monopole with one
>> radial.
>>
>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>> The radial is in line with the monopole. Everything is ungrounded.
>
> # The radial connected with the shield of the coax is the ground.
>
```

>>
>> How does that configuration of a monopole with one radial differ from a
>> dipole?

The true horizontal dipole (electrically symmetric) radiate in one direction
only. A monopole in all directions.
>
> So a half wave wire broken at the center is a monopole with a single
> radial if it is fed directly with coax?

Yes. The one leg is the radiator and the second is a ground (like a
satellite chassis).

> And it is a dipole if it has a balanced feed?

The true dipole is electrically symmetric. The same voltages but in the
opposite phase.
Thank this the interference take place and a dipole has the main lobe and
many side lobes.
With the monopole no lobes.
>
> What if the coax feedline has a quarter wave sleeve, open at the antenna
> but connected to the coax at the other end?
> Is it a monopole or a dipole?

"Marconi, who discovered if he attached one terminal of his transmitter to a
wire suspended in the air and the other to the Earth, he could transmit for
longer distances".

As you know are many version of ground because the soil is not the best.
The sleeve, the braid of the coax and so on are only the better ground.

Dipole must be electrically symmetric.
If one leg is connected to the any version of ground such "dipole" radiate
as monopole.
S*

285. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 08:17:13 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <517f7e0b$0$1226$65785112@news.neostrada.pl>
Source record: 58

```
"tom" <news4792@taring.org> napisal w wiadomosci
news:ltCdnZafQce2pOLMnZ2dnUVZ_ridnZ2d@iphouse.net...
> On 4/29/2013 10:20 PM, tom wrote:
>> On 4/29/2013 3:50 AM, Szczepan Bialek wrote:
>>> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
>>>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>>>> The radial is in line with the monopole. Everything is ungrounded.
>>>
>>> The radial connected with the shield of the coax is the ground.
>>
>> So what would happen if I connected my transmitter, which has a 50 ohm
>> {ostensibly) output with the hot lead of the coax connected to the
>> "radial" instead of the "monopole" and similarly with the braid?
>>
>> Think long about this.
>>
>
> Just to clearly understand where you are on how this really works.

I am not sure if I understand you.

If you have the mechanically symmetric dipole than one leg with the coax
braid works as the radiator and the second as the ground.
If you change the terminals than your radial will be the radiator.

Do not you have any possibility to check which leg is active?
S*
```

286. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 15:20:57 UTC
From: nm5k@wt.net
Message-ID: <4faaf825-ab4e-4a4e-8edd-078e3c27fa1c@googlegroups.com>
Source record: 59

On Tuesday, April 30, 2013 3:17:13 AM UTC-5, Szczepan Bialek wrote:

> I am not sure if I understand you.

Gee... you think?

287. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 16:03:02 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <mi655a-t03.ln1@mail.specsol.com>
Source record: 60

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> "Rob" <nomail@example.com> napisa? w wiadomo?ci
> news:slrnknta1h.spb.nomail@xs8.xs4all.nl...
>> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>> The "ground plane antenna" is also the monopole:
>>> "To function as a ground plane, the conducting surface must be at least a
>>> quarter of the wavelength (?/4) of the radio waves in size. In lower
>>> frequency antennas, such as the mast radiators used for broadcast
>>> antennas,
>>> the Earth itself (or a body of water such as a salt marsh or ocean) is
>>> used
>>> as a ground plane. For higher frequency antennas, in the VHF or UHF
>>> range,
>>> the ground plane can be smaller, and metal disks, screens or wires are
>>> used
>>> as ground planes".
>>
>> Note that it does not say that it is sufficient to connect one side
>> of the antenna to the ground with a wire.
>
> Note what Marconi did: "Marconi, who discovered if he attached one terminal
> of his transmitter to a
> wire suspended in the air and the other to the Earth, he could transmit for
> longer distances."

Irrelevant to anything said, but you are too ignorant to understand why.

>> A ground plane is something different than a wire to ground.
>
> The nonactive leg of the popular "dipole" is connected with the braid of a
> coax and the mass (chassis) of the transmitter.

Pure babble.

Both legs of a dipole are "active".

Not all dipoles are feed with coax.

Some transmitters have no chassis or metal mass of any kind, a good
example of which would be radiosondes before transistors were invented.

They were build on a non-conductive sheet using point to point wiring
and had no metal mass, no chassis, no ground, and were hung from
balloons.

> The braid has many wires. Each of them is the radial.
```

Pure babbling, nonsense.

--
Jim Pennino

288. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 16:05:54 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <2o655a-t03.ln1@mail.specsol.com>
Source record: 61

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> "Ian" <no-spam-please@I-am-Veggie.org> napisa? w wiadomo?ci
> news:klm9mv$78c$1@speranza.aioe.org...
>> "Szczepan Bialek" <sz.bialek@wp.pl> wrote in message
>> news:517ea2e2$0$1269$65785112@news.neostrada.pl...
>>> Not me but Wiki:
>>> "The monopole antenna was invented ...
>>> For radioamateurs the one wire is enough. The dipole is useless for them.
>>> They want to "transmit for longer distances".
>>>
>>> S*
>>
>> Hello old chap.
>>
>> There is surely no point in posting quotations from Wiki if you do not
>> understand them.
>> The comment about dipoles being useless for amateurs is definitely
>> incorrect. The dipole is a very popular design of antenna for amateur
>> radio
>> use.
>
> Do you mean the dipoles fed by the coax or by the ladder line?

It doesn't matter but you are too stupid to understand why.

And both methods of feed are very popular.

Repeat the following until it sinks into your only two functioning brain
cells:

An antenna is an antenna and a feedline is a feedline.

--
Jim Pennino
```

289. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 16:09:19 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <fu655a-t03.ln1@mail.specsol.com>
Source record: 62

Szczepan Bialek <sz.bialek@wp.pl> wrote:

> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
> news:klmb1j$4f8$1@dont-email.me...
>>

<snip>

>>> How does that configuration of a monopole with one radial differ from a
>>> dipole?
>
> The true horizontal dipole (electrically symmetric) radiate in one direction
> only. A monopole in all directions.

A dipole radiates in two directions, idiot.

>> So a half wave wire broken at the center is a monopole with a single
>> radial if it is fed directly with coax?
>
> Yes. The one leg is the radiator and the second is a ground (like a
> satellite chassis).

Absurd nonsense.

>> And it is a dipole if it has a balanced feed?
>
> The true dipole is electrically symmetric. The same voltages but in the
> opposite phase.
> Thank this the interference take place and a dipole has the main lobe and
> many side lobes.
> With the monopole no lobes.

Babbling gibberish as usual.

>> What if the coax feedline has a quarter wave sleeve, open at the antenna
>> but connected to the coax at the other end?
>> Is it a monopole or a dipole?
>
> "Marconi, who discovered if he attached one terminal of his transmitter to a
> wire suspended in the air and the other to the Earth, he could transmit for
> longer distances".

This has nothing to do with the question asked.

You haven't the slightest clue what a quarter wave sleeve is or what it
does.

> As you know are many version of ground because the soil is not the best.
> The sleeve, the braid of the coax and so on are only the better ground.

Utter nonsense.

> Dipole must be electrically symmetric.
> If one leg is connected to the any version of ground such "dipole" radiate
> as monopole.

More babble.

You truely are an idiot.

--
Jim Pennino

290. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 16:11:17 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <52755a-t03.ln1@mail.specsol.com>
Source record: 63

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> "tom" <news4792@taring.org> napisal w wiadomosci
> news:ltCdnZafQce2pOLMnZ2dnUVZ_ridnZ2d@iphouse.net...
>> On 4/29/2013 10:20 PM, tom wrote:
>>> On 4/29/2013 3:50 AM, Szczepan Bialek wrote:
>>>> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
>>>>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>>>>> The radial is in line with the monopole. Everything is ungrounded.
>>>>
>>>> The radial connected with the shield of the coax is the ground.
>>>
>>> So what would happen if I connected my transmitter, which has a 50 ohm
>>> {ostensibly) output with the hot lead of the coax connected to the
>>> "radial" instead of the "monopole" and similarly with the braid?
>>>
>>> Think long about this.
>>>
>>
>> Just to clearly understand where you are on how this really works.
>
> I am not sure if I understand you.

You don't understand anything.

> If you have the mechanically symmetric dipole than one leg with the coax
> braid works as the radiator and the second as the ground.
> If you change the terminals than your radial will be the radiator.

Babbling nonsense.

> Do not you have any possibility to check which leg is active?

More nonsense.

--
Jim Pennino
```

291. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 17:02:23 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <klot8q$7ir$1@dont-email.me>
Source record: 64

```
"Szczepan Bialek" wrote in message
news:517f7c10$0$1217$65785112@news.neostrada.pl...

"Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
news:klmb1j$4f8$1@dont-email.me...
>
>
> "Szczepan Bialek" wrote in message
> news:517e345a$0$26694$65785112@news.neostrada.pl...
>
>
> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
> news:klk0ip$qdg$1@dont-email.me...
>>
>>
>> "Szczepan Bialek" wrote in message
>> news:517cd721$0$1227$65785112@news.neostrada.pl...
>>
>>
>>>>> On Friday, April 26, 2013 12:38:06 PM UTC-5, Irv Finkleman wrote:
>>> <snip>
>>>>>
>>>>> Maybe SB can explain the difference between a monopole with a single
>>>>> ungrounded radial, and a dipole.
>>>
>>>>Each radial, grounded or not (but connected to the shield of the coax),
>>>>is the ground.
>>>>The Earth, the Moon, a satelite and each piece of conductor is ground
>>>>for antennas. Radial is one of them.
>>>>Ground must be adequate to kW.
>>>
>>> What if the single ungrounded quarter wave radial is in line with the
>>> quarter wave radiator?
>>> Is it still a monopole?
>>
>> # Of course.
>>
>> Wow...you gave a lot to digest.
>>
>> Just to understand the discussion, let's address the monopole with one
>> radial.
>>
>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>> The radial is in line with the monopole. Everything is ungrounded.
```

>
> # The radial connected with the shield of the coax is the ground.
>
>>
>> How does that configuration of a monopole with one radial differ from a
>> dipole?

The true horizontal dipole (electrically symmetric) radiate in one direction
only. A monopole in all directions.
>
> So a half wave wire broken at the center is a monopole with a single
> radial if it is fed directly with coax?

Yes. The one leg is the radiator and the second is a ground (like a
satellite chassis).

So with direct coax connection, one leg radiates and the other leg is
ground?

Would you be willing to touch the end of the "ground"/"radial" wire while
transmitting?

292. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 17:07:27 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <klotih$9j2$1@dont-email.me>
Source record: 65

```
On 4/13/2013 10:05 PM, Bob wrote:
> I was looking into an artificial ground because I live on a second floor and
> thought it might be useful, especially in support of a necessarily long ground
> connection. I did do a search, but only came up with links related to the MFJ
> offerings which only go to 30MHz. I'm hoping for one that covers 6 meters as
> well. Does anyone here know where I can find plans to construct one?
>
> Thanks & 73,
> Bob KB2ZGN
>

I'm sure plans exist on the Internet, but it's a lot easier to just buy
a bag of it at a nursery. :-)
```

293. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 17:08:29 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <517ffa8f$0$1251$65785112@news.neostrada.pl>
Source record: 66

U?ytkownik <jimp@specsol.spam.sux.com> napisa? w wiadomo?ci
news:fu655a-t03.ln1@mail.specsol.com...
> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
>>
>> "Marconi, who discovered if he attached one terminal of his transmitter
>> to a
>> wire suspended in the air and the other to the Earth, he could transmit
>> for
>> longer distances".
>
> This has nothing to do with the question asked.

>
>> As you know are many version of ground because the soil is not the best.
>> The sleeve, the braid of the coax and so on are only the better ground.
>
> Utter nonsense.
>
>> Dipole must be electrically symmetric.
>> If one leg is connected to the any version of ground such "dipole"
>> radiate
>> as monopole.
>
> More babble.
>
> You truely are an idiot.

You know only the EM waves. They "were made" by Heaviside in 1884, years
before Marconi and Tesla.
Take a glance on the Marconi Nobel lecture from 1909.
http://www.nobelprize.org/nobel_prizes/physics/laureates/1909/marconi-lecture.pdf
There (in references) no EM waves. No Heaviside. No Maxwell
Marconi wrote: "In my opinion many facts connected with the transmission of
electric
waves over great distances still await a satisfactory explanation".

Electric waves are radiated. EM is an induction.

About ground Marconi wrote:

"The necessity or utility of the earth connection has been sometimes
questioned,

but in my opinion no practical system of wireless telegraphy exists

where the instruments are not connected to earth.

By "connected to earth" I do not necessarily mean an ordinary metallic

connection as used for ordinary wire telegraphs.

The earth wire may have a condenser in series with it, or it may be connected

to what is really equivalent, a capacity area placed close to the surface

of the ground (Fig. 4).

It is now perfectly well known that a condenser, if large enough, does not

prevent the passage of high frequency oscillations, and therefore in these cases

the earth is for all practical purposes connected to the antennae."

Was Marconi an idiot?

S*

294. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 17:20:22 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnknvvam.n7l.nomail@xs8.xs4all.nl>
Source record: 67

Szczepan Bialek <sz.bialek@wp.pl> wrote:
> It is now perfectly well known that a condenser, if large enough, does not
>
> prevent the passage of high frequency oscillations, and therefore in these
> cases
>
> the earth is for all practical purposes connected to the antennae."

It is also well known that a conductor, when long enough, presents
itself as an inductor and does not allow passage of high frequency
oscillations.

Is Szczepan an idiot?

295. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 17:26:25 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <517ffec2$0$26707$65785112@news.neostrada.pl>
Source record: 68

"Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
news:klot8q$7ir$1@dont-email.me...
>
>
> "Szczepan Bialek" wrote in message
> news:517f7c10$0$1217$65785112@news.neostrada.pl...
>
>>
>> # The radial connected with the shield of the coax is the ground.
>>
>>>
>>> How does that configuration of a monopole with one radial differ from a
>>> dipole?
>
> The true horizontal dipole (electrically symmetric) radiate in one
> direction
> only. A monopole in all directions.
>>
>> So a half wave wire broken at the center is a monopole with a single
>> radial if it is fed directly with coax?
>
> # Yes. The one leg is the radiator and the second is a ground (like a
> # satellite chassis).
>
> So with direct coax connection, one leg radiates and the other leg is
> ground?

Yes.
>
> Would you be willing to touch the end of the "ground"/"radial" wire while
> transmitting?

The electron density changes periodically in the both legs (while
transmitting).
Are the voltages equal in the both legs?

If you are really interested in electric waves look at Maconi Nobel lecture:
http://www.nobelprize.org/nobel_prizes/physics/laureates/1909/marconi-lecture.pdf
S*

296. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 17:26:35 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <3fKdnWeJcddQY-LMnZ2dnUVZ_rCdnZ2d@earthlink.com>
Source record: 69

"Rob" <nomail@example.com> wrote in message
news:slrnknvvam.n7l.nomail@xs8.xs4all.nl...
> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>> It is now perfectly well known that a condenser, if large enough, does
>> not
>>

> Is Szczepan an idiot?

I think the ones answering him are...

297. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 17:59:07 UTC
From: dplatt@radagast.org
Message-ID: <bcd55a-3dj.ln1@radagast.org>
Source record: 70

>> I was looking into an artificial ground because I live on a second floor and
>> thought it might be useful, especially in support of a necessarily long ground
>> connection. I did do a search, but only came up with links related to the MFJ
>> offerings which only go to 30MHz. I'm hoping for one that covers 6 meters as
>> well. Does anyone here know where I can find plans to construct one?
>>
>> Thanks & 73,
>> Bob KB2ZGN
>>
>
>I'm sure plans exist on the Internet, but it's a lot easier to just buy
>a bag of it at a nursery. :-)

Make sure you select the right variety, of course. A bag of
well-drained cactus mix is the best choice if you're going to put up a
"plumber's delight" J-pole such as the "Copper Cactus".

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

298. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-04-30 19:41:23 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <klp6iv$1sq$1@dont-email.me>
Source record: 71

"Szczepan Bialek" wrote in message
news:517ffec2$0$26707$65785112@news.neostrada.pl...

"Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
news:klot8q$7ir$1@dont-email.me...
>
>
> "Szczepan Bialek" wrote in message
> news:517f7c10$0$1217$65785112@news.neostrada.pl...
>
>>
>> # The radial connected with the shield of the coax is the ground.
>>
>>>
>>> How does that configuration of a monopole with one radial differ from a
>>> dipole?
>
> The true horizontal dipole (electrically symmetric) radiate in one
> direction
> only. A monopole in all directions.
>>
>> So a half wave wire broken at the center is a monopole with a single
>> radial if it is fed directly with coax?
>
> # Yes. The one leg is the radiator and the second is a ground (like a
> # satellite chassis).
>
> So with direct coax connection, one leg radiates and the other leg is
> ground?

Yes.
>
> Would you be willing to touch the end of the "ground"/"radial" wire while
> transmitting?

The electron density changes periodically in the both legs (while
transmitting).
Are the voltages equal in the both legs?

But the question was: if the half of the antenna connected to the coax is
ground, would you be willing to touch the end of that half while RF power is
supplied to the center conductor connected half of the antenna?

That would be a good way of verifying your theory.

299. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 00:17:03 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <vg365a-0u5.ln1@mail.specsol.com>
Source record: 72

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> U?ytkownik <jimp@specsol.spam.sux.com> napisa? w wiadomo?ci
> news:fu655a-t03.ln1@mail.specsol.com...
>> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>
>>>
>>> "Marconi, who discovered if he attached one terminal of his transmitter
>>> to a
>>> wire suspended in the air and the other to the Earth, he could transmit
>>> for
>>> longer distances".
>>
>> This has nothing to do with the question asked.
>
>
>>
>>> As you know are many version of ground because the soil is not the best.
>>> The sleeve, the braid of the coax and so on are only the better ground.
>>
>> Utter nonsense.
>>
>>> Dipole must be electrically symmetric.
>>> If one leg is connected to the any version of ground such "dipole"
>>> radiate
>>> as monopole.
>>
>> More babble.
>>
>> You truely are an idiot.
>
> You know only the EM waves. They "were made" by Heaviside in 1884, years
> before Marconi and Tesla.

Babble.

> Take a glance on the Marconi Nobel lecture from 1909.
> http://www.nobelprize.org/nobel_prizes/physics/laureates/1909/marconi-lecture.pdf
> There (in references) no EM waves. No Heaviside. No Maxwell

More babble.

> Marconi wrote: "In my opinion many facts connected with the transmission of
> electric
> waves over great distances still await a satisfactory explanation".
```

Over 100 years old; EM radiation is now well understood by just about
everyone but you.

> Electric waves are radiated. EM is an induction.

Yet more babble.

> About ground Marconi wrote:
>
> "The necessity or utility of the earth connection has been sometimes
> questioned,
>
> but in my opinion no practical system of wireless telegraphy exists
>
> where the instruments are not connected to earth.
>
> By "connected to earth" I do not necessarily mean an ordinary metallic
>
> connection as used for ordinary wire telegraphs.
>
> The earth wire may have a condenser in series with it, or it may be
> connected
>
> to what is really equivalent, a capacity area placed close to the surface
>
> of the ground (Fig. 4).
>
> It is now perfectly well known that a condenser, if large enough, does not
>
> prevent the passage of high frequency oscillations, and therefore in these
> cases
>
> the earth is for all practical purposes connected to the antennae."
>
> Was Marconi an idiot?

No, Marconi was simply proven wrong about the ground requirement many
decades ago.

The majority of antennas that exist today were invented after Marconi died.

You, however, are a babbling idiot.

--
Jim Pennino

300. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 00:17:47 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <bi365a-0u5.ln1@mail.specsol.com>
Source record: 73

Rob <nomail@example.com> wrote:
> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>> It is now perfectly well known that a condenser, if large enough, does not
>>
>> prevent the passage of high frequency oscillations, and therefore in these
>> cases
>>
>> the earth is for all practical purposes connected to the antennae."
>
> It is also well known that a conductor, when long enough, presents
> itself as an inductor and does not allow passage of high frequency
> oscillations.
>
> Is Szczepan an idiot?

Yes, Szczepan is a babbling idiot.

--
Jim Pennino

301. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 00:22:00 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <8q365a-0u5.ln1@mail.specsol.com>
Source record: 74

Szczepan Bialek <sz.bialek@wp.pl> wrote:

<snip>

> The electron density changes periodically in the both legs (while
> transmitting).
> Are the voltages equal in the both legs?

If you actually knew anything about antennas you would realize that is
an immensely stupid question.

> If you are really interested in electric waves look at Maconi Nobel lecture:
> http://www.nobelprize.org/nobel_prizes/physics/laureates/1909/marconi-lecture.pdf

Most of the knowledge of electromagnetic waves, not "electric waves", was
obtained after 1909.

Your are not only and idiot, you are an idiot 100 years out of date.

--
Jim Pennino

302. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 01:44:47 UTC
From: tom <news4792@taring.org>
Message-ID: <HsidnaFxeOMT7h3MnZ2dnUVZ_sqdnZ2d@iphouse.net>
Source record: 75

```
On 4/30/2013 3:17 AM, Szczepan Bialek wrote:
> "tom" <news4792@taring.org> napisal w wiadomosci
> news:ltCdnZafQce2pOLMnZ2dnUVZ_ridnZ2d@iphouse.net...
>> On 4/29/2013 10:20 PM, tom wrote:
>>> On 4/29/2013 3:50 AM, Szczepan Bialek wrote:
>>>> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
>>>>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>>>>> The radial is in line with the monopole. Everything is ungrounded.
>>>>
>>>> The radial connected with the shield of the coax is the ground.
>>>
>>> So what would happen if I connected my transmitter, which has a 50 ohm
>>> {ostensibly) output with the hot lead of the coax connected to the
>>> "radial" instead of the "monopole" and similarly with the braid?
>>>
>>> Think long about this.
>>>
>>
>> Just to clearly understand where you are on how this really works.
>
> I am not sure if I understand you.
>
> If you have the mechanically symmetric dipole than one leg with the coax
> braid works as the radiator and the second as the ground.
> If you change the terminals than your radial will be the radiator.
>
> Do not you have any possibility to check which leg is active?
> S*
>
>

How does the "leg" know if it is connected to the braid versus the
center conductor?

tom
K0TAR
```

303. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 01:56:45 UTC
From: tom <news4792@taring.org>
Message-ID: <-eydncVkCbzB6x3MnZ2dnUVZ_q-dnZ2d@iphouse.net>
Source record: 76

On 4/30/2013 12:08 PM, Szczepan Bialek wrote:
>
> It is now perfectly well known that a condenser, if large enough, does not
>
> prevent the passage of high frequency oscillations, and therefore in these
> cases
>
> the earth is for all practical purposes connected to the antennae."
>
> Was Marconi an idiot?
>
> S*
>
>

If you pick the text you posted here yes, he was an idiot by your definition. He wasn't really an idiot, unlike you.

Because the earth is NOT "in these cases the earth is for all practical purposes connected to the antennae" for well over 99% of all the antennas in use today. Because it doesn't need to be.

tom
K0TAR

304. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 02:10:38 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <u5a65a-1k6.ln1@mail.specsol.com>
Source record: 77

```
tom <news4792@taring.org> wrote:
> On 4/30/2013 3:17 AM, Szczepan Bialek wrote:
>> "tom" <news4792@taring.org> napisal w wiadomosci
>> news:ltCdnZafQce2pOLMnZ2dnUVZ_ridnZ2d@iphouse.net...
>>> On 4/29/2013 10:20 PM, tom wrote:
>>>> On 4/29/2013 3:50 AM, Szczepan Bialek wrote:
>>>>> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
>>>>>> Assuming the monopole is 1/4 wave long, and has a 1/4 wave long radial.
>>>>>> The radial is in line with the monopole. Everything is ungrounded.
>>>>>
>>>>> The radial connected with the shield of the coax is the ground.
>>>>
>>>> So what would happen if I connected my transmitter, which has a 50 ohm
>>>> {ostensibly) output with the hot lead of the coax connected to the
>>>> "radial" instead of the "monopole" and similarly with the braid?
>>>>
>>>> Think long about this.
>>>>
>>>
>>> Just to clearly understand where you are on how this really works.
>>
>> I am not sure if I understand you.
>>
>> If you have the mechanically symmetric dipole than one leg with the coax
>> braid works as the radiator and the second as the ground.
>> If you change the terminals than your radial will be the radiator.
>>
>> Do not you have any possibility to check which leg is active?
>> S*
>>
>>
>
> How does the "leg" know if it is connected to the braid versus the
> center conductor?
>
> tom
> K0TAR

A better question is how does this idiot to come in out of the rain
or does he just stand there, looking at the sky with with his mouth open,
until someone notices the gurgling sounds and takes him inside?

--
Jim Pennino
```

305. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 07:32:15 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <5180c502$0$1222$65785112@news.neostrada.pl>
Source record: 78

<jimp@specsol.spam.sux.com> napisa&#65533; w wiadomo&#65533;ci
news:bi365a-0u5.ln1@mail.specsol.com...
> Rob <nomail@example.com> wrote:
>> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>> It is now perfectly well known that a condenser, if large enough, does
>>> not
>>>
>>> prevent the passage of high frequency oscillations, and therefore in
>>> these
>>> cases
>>>
>>> the earth is for all practical purposes connected to the antennae."
>>
>> It is also well known that a conductor, when long enough, presents
>> itself as an inductor and does not allow passage of high frequency
>> oscillations.
>>
>> Is Szczepan an idiot?
>
> Yes, Szczepan is a babbling idiot.

And what about you? Ralph wrote:
"I think the ones answering him are..."
S*

306. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 07:36:22 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <5180c5f8$0$1217$65785112@news.neostrada.pl>
Source record: 79

<jimp@specsol.spam.sux.com> napisa&#65533; w wiadomo&#65533;ci
news:vg365a-0u5.ln1@mail.specsol.com...
> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>
>>
>> You know only the EM waves. They "were made" by Heaviside in 1884, years
>> before Marconi and Tesla.
>
> Babble.
>
>> Take a glance on the Marconi Nobel lecture from 1909.
>> http://www.nobelprize.org/nobel_prizes/physics/laureates/1909/marconi-lecture.pdf
>> There (in references) no EM waves. No Heaviside. No Maxwell
>
> More babble.
>
>> Marconi wrote: "In my opinion many facts connected with the transmission
>> of
>> electric
>> waves over great distances still await a satisfactory explanation".
>
> Over 100 years old; EM radiation is now well understood by just about
> everyone but you.

```
EM by Maxwell and Heaviside are much older.
>
>> Electric waves are radiated. EM is an induction.
S*
```

307. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 08:40:23 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <5180d4f9$0$1219$65785112@news.neostrada.pl>
Source record: 80

"Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
news:klp6iv$1sq$1@dont-email.me...
>
>
> "Szczepan Bialek" wrote in message
> news:517ffec2$0$26707$65785112@news.neostrada.pl...
>
>
>>
>> So with direct coax connection, one leg radiates and the other leg is
>> ground?
>
> # Yes.
>>
>> Would you be willing to touch the end of the "ground"/"radial" wire while
>> transmitting?
>
> # The electron density changes periodically in the both legs (while
> # transmitting).
> # Are the voltages equal in the both legs?
>
> But the question was: if the half of the antenna connected to the coax is
> ground, would you be willing to touch the end of that half while RF power
> is supplied to the center conductor connected half of the antenna?
>
> That would be a good way of verifying your theory.

It is not my theory. Somebody wrote:
"H. Horizontal, unbalanced antennas, such as a long wire or random wire,
need an RF Ground wire that should be 10-15% longer than the antenna wire
itself. This is often called a counterpoise. The RF ground wire in this case
can be laid out in many ways, just so long as it does not cross over itself
to form a loop. Indoors, such wires are often run under carpets or along
walls, out of windows, or anywhere else convenient. This wire will often
have large RF voltages on it, so it should be kept away from people or
insulated to prevent contact." From:
http://www.sgcworld.com/radialstechnote.html

Your "dipoles" are "horizontal, unbalanced antennas". The radial or
counterpoise "should be kept away from people or insulated to prevent
contact."
The "mechanically symmetric dipole" is the simplest solution.
Do you agree?
S*
>

308. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 08:47:40 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <5180d6b2$0$1262$65785112@news.neostrada.pl>
Source record: 81

"tom" <news4792@taring.org> napisal w wiadomosci
news:-eydncVkCbzB6x3MnZ2dnUVZ_q-dnZ2d@iphouse.net...
> On 4/30/2013 12:08 PM, Szczepan Bialek wrote:
>>
>> It is now perfectly well known that a condenser, if large enough, does
>> not
>>
>> prevent the passage of high frequency oscillations, and therefore in
>> these
>> cases
>>
>> the earth is for all practical purposes connected to the antennae."
>>
>> Was Marconi an idiot?
>>
>> S*
>>
>>
>
> If you pick the text you posted here yes, he was an idiot by your
> definition. He wasn't really an idiot, unlike you.
>
> Because the earth is NOT "in these cases the earth is for all practical
> purposes connected to the antennae" for well over 99% of all the antennas
> in use today. Because it doesn't need to be.

You simply do not know that:
"In electronic circuit theory, a "ground" is usually idealized as an
infinite source or sink for charge, which can absorb an unlimited amount of
current without changing its potential." and,

"The use of the term ground (or earth) is so common in electrical and
electronics applications that circuits in portable electronic devices such
as cell phones and media players as well as circuits in vehicles may be
spoken of as having a "ground" connection without any actual connection to
the Earth. This is usually a large conductor attached to one side of the
power supply (such as the "ground plane" on a printed circuit board) which
serves as the common return path for current from many different components
in the circuit." From:
http://en.wikipedia.org/wiki/Ground_(electricity)

The same was wrote by Marconi.
S*

309. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 13:53:51 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <fcj75a-pdb.ln1@mail.specsol.com>
Source record: 82

Szczepan Bialek <sz.bialek@wp.pl> wrote:

> And what about you? Ralph wrote:
> "I think the ones answering him are..."
> S*

So you are proud of the fact that someone thinks answering your babbling nonsense is a waste of time?

--
Jim Pennino

310. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 13:56:49 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <1ij75a-pdb.ln1@mail.specsol.com>
Source record: 83

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> <jimp@specsol.spam.sux.com> napisa? w wiadomo?ci
> news:vg365a-0u5.ln1@mail.specsol.com...
>> Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>>
>>>
>>> You know only the EM waves. They "were made" by Heaviside in 1884, years
>>> before Marconi and Tesla.
>>
>> Babble.
>>
>>> Take a glance on the Marconi Nobel lecture from 1909.
>>> http://www.nobelprize.org/nobel_prizes/physics/laureates/1909/marconi-lecture.pdf
>>> There (in references) no EM waves. No Heaviside. No Maxwell
>>
>> More babble.
>>
>>> Marconi wrote: "In my opinion many facts connected with the transmission
>>> of
>>> electric
>>> waves over great distances still await a satisfactory explanation".
>>
>> Over 100 years old; EM radiation is now well understood by just about
>> everyone but you.
>
> EM by Maxwell and Heaviside are much older.

One more time; EM radiation is now well understood by just about
everyone but you.

The majority of EM radiation theory was formulated after 1909.

Continuing to quote Maxwell, Heaviside, and Marconi just shows how
obsolete your "knowledge" is.

--
Jim Pennino
```

311. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 14:00:59 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <rpj75a-pdb.ln1@mail.specsol.com>
Source record: 84

Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> "tom" <news4792@taring.org> napisal w wiadomosci
> news:-eydncVkCbzB6x3MnZ2dnUVZ_q-dnZ2d@iphouse.net...
>> On 4/30/2013 12:08 PM, Szczepan Bialek wrote:
>>>
>>> It is now perfectly well known that a condenser, if large enough, does
>>> not
>>>
>>> prevent the passage of high frequency oscillations, and therefore in
>>> these
>>> cases
>>>
>>> the earth is for all practical purposes connected to the antennae."
>>>
>>> Was Marconi an idiot?
>>>
>>> S*
>>>
>>>
>>
>> If you pick the text you posted here yes, he was an idiot by your
>> definition. He wasn't really an idiot, unlike you.
>>
>> Because the earth is NOT "in these cases the earth is for all practical
>> purposes connected to the antennae" for well over 99% of all the antennas
>> in use today. Because it doesn't need to be.
>
> You simply do not know that:
> "In electronic circuit theory, a "ground" is usually idealized as an
> infinite source or sink for charge, which can absorb an unlimited amount of
> current without changing its potential." and,

Irrelevant.

> "The use of the term ground (or earth) is so common in electrical and
> electronics applications that circuits in portable electronic devices such
> as cell phones and media players as well as circuits in vehicles may be
> spoken of as having a "ground" connection without any actual connection to
> the Earth. This is usually a large conductor attached to one side of the
> power supply (such as the "ground plane" on a printed circuit board) which
> serves as the common return path for current from many different components
> in the circuit." From:
> http://en.wikipedia.org/wiki/Ground_(electricity)

Irrelevant.

> The same was wrote by Marconi.

Marconi was proven wrong.

Where is the ground on a WWII era radiosonde?

No chassis, no "ground plane", no ciruit board, only point-to-point wiring on a non-conductive mounting board and an antenna that is a piece of wire connected to the plate circuit.

--
Jim Pennino

312. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 17:28:01 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <klrj52$qq3$1@dont-email.me>
Source record: 85

On 4/30/2013 12:59 PM, Dave Platt wrote:
>>> I was looking into an artificial ground because I live on a second floor and
>>> thought it might be useful, especially in support of a necessarily long ground
>>> connection. I did do a search, but only came up with links related to the MFJ
>>> offerings which only go to 30MHz. I'm hoping for one that covers 6 meters as
>>> well. Does anyone here know where I can find plans to construct one?
>>>
>>> Thanks & 73,
>>> Bob KB2ZGN
>>>
>>
>> I'm sure plans exist on the Internet, but it's a lot easier to just buy
>> a bag of it at a nursery. :-)
>
> Make sure you select the right variety, of course. A bag of
> well-drained cactus mix is the best choice if you're going to put up a
> "plumber's delight" J-pole such as the "Copper Cactus".
>
>

Good point. But how about the "Wet Dream" antenna which has been known
to withstand a hurricane? There must be a trade-off.

313. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-01 18:38:28 UTC
From: dplatt@radagast.org
Message-ID: <42485a-io9.ln1@radagast.org>
Source record: 86

>>> I'm sure plans exist on the Internet, but it's a lot easier to just buy
>>> a bag of it at a nursery. :-)
>>
>> Make sure you select the right variety, of course. A bag of
>> well-drained cactus mix is the best choice if you're going to put up a
>> "plumber's delight" J-pole such as the "Copper Cactus".
>
>Good point. But how about the "Wet Dream" antenna which has been known
>to withstand a hurricane? There must be a trade-off.

For that type, I think you want to order up a few dumptruck loads of
adobe or caliche ground :-)

--
Dave Platt <dplatt@radagast.org> AE6EO
Friends of Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

314. Re: Testing Cushcraft traps

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-02 05:20:23 UTC
From: ve3sfv@gmail.com
Message-ID: <9ea7f6aa-1b6b-464c-ab18-ff2918915c25@googlegroups.com>
Source record: 87

On Wednesday, January 23, 2002 3:37:52 PM UTC-5, Neil wrote:
> (The following is provided as an opinion only, and without warranty of
> ANY kind. You take all the risk. If you are NOT comfortable doing
> this job, STOP, you may ruin your antenna. That being said, my own
> results have been very good...)
>
> Hi Alf;
>
> I was in the same situation as you when I embarked on a project of A4S
> testing and recovery. It's been a long slow path, but the end result
> is very satisfying. The unit I have includes the 40 meter add-on kit.
>
> As you, I found that the "support" at Cushcraft amounted to little
> more than a junior employee telling me he didn't know of any trap
> problems...YEAH RIGHT!
>
> You need to decide what makes the most sense for you. You can
> properly restore the antenna, or try to band-aid it hoping for the
> best. If you do the latter, depending on your weather and climate,
> you will likely see regular trap failures, partucularly in wet or icy
> conditions. Sometimes they will clear up when things dry out again,
> but sometimes you can get internal arcing or opens, in which case the
> only remedy is to bring the whole antenna down and work on it. If you
> don't mind doing this every six months or so, then you're more
> energetic than I.
>
> The resonant points of the traps are neither intutive nor easy to
> measure with any certainty. In my experience the best approach to
> dealing with this antenna is to open up EVERY trap and give it a
> thorough going-over (described below). If you do this, then the
> chances are very good that you've got at least several years of
> worry-free operation, hurricanes notwithstanding.
>
> So here goes:
>
> 1. During disassembly, mark each trap according to its type, TA, TK,
> etc. with a black magic marker on the outside of the metal can. Also
> draw an arrow -> pointing toward the boom (this is not really
> necessary, but can help avoid a backwards mounted trap).
>
> 2. Pick a trap to begin with and remove the end caps. Note whether
> they are cracked or dried. (You'll want to order a bunch of
> replacements from Cushcraft, be sure to order a few extras.)
>

> 3. Notice that the trap has on one end a region of the can that has
> been stamp-formed inwardly, and has a screw attaching it to the
> element tubing (remove this screw and save it). The other end of the
> can has a few dimples that have been impressed into it. These dimples
> rest in a groove in a spacer doughnut inside the end of the trap, and
> will make disassembly very hard.
>
> Now for the tough part...
>
> 4. Using only as large a drill bit as necessary, drill out all of the
> pesky dimples. Don't drill any deeper than you have to, you just
> have to penetrate the aluminum can. Yes, this drilling will very
> slightly change the capacitance, but experimentally it hasn't seemed
> to matter. It's best to use a drill press for this step so you can
> better control how deep you go. Now, the discovery...telescope the
> trap "guts" and the spacer doughnut out that end of the trap, and see
> what's inside (for better or worse)!
>
> 5. Inspect for insects, dirt, arcing or burn marks, etc. Clean up the
> trap contents, but do NOT use any solvents nor abrasives on the body
> of the coil. In most cases a soft bristle brush and a vacuum cleaner
> will do fine. Compressed air is also a help.
>
> 6. Notice that each end the coil is fastened to the tubing with a
> thread-cutting screw. This interface is where most of the contact
> problems occur, due to the copper-to-aluminum interface.
>
> Here's the messy part...
>
> 6. Remove each coil-end screw (2) and observe if the screw itself has
> rusted/corroded warranting replacement. If so, get a stainless screw
> of the same design and size. Now lift the end of the copper coil
> slightly and abrade the two contacting surfaces (one copper, one
> aluminum) using a fine grit double sided emery file (or a diamond-dust
> double-sided nail file). You can also clean up the top of the copper
> wire (just at that point) so the screw will have a clean contact area
> to clamp onto. Using Penetrox-A, grease up all of the contact areas
> thoroughly, and tightly reinstall the two hold-down screws (don't
> strip them!). Work clean, keep a clean rag handy, and be careful not
> to get Penetrox on the coil windings, nor anywhere else for that
> matter (not easy).
>
> 7. Reassemble the trap. Using a similar approach, abrade and grease
> up the contacting surfaces where the screw removed in step 3 goes.
> Replace this screw with a new one if it's badly corroded, tighten well
> but don't strip.
>
> 8. Replace the plastic end caps, either with your originals (if
> intact) or with new ones. Now, ohm out the trap, you should see a
> small fraction of 1 ohm, in other words a DC short. If you see any

> appreciable resistance, something's wrong, don't continue till you
> resolve it.
>
> 9. Repeat with all traps.
>
> 10. Reassemble the antenna, putting a layer of Penetrox-A in each of
> the tubing joints prior to insertion.
>
> Once you do this, and get the antenna tuned up to the band centers you
> like, it should be very stable for a very long time.
>
> Note: If in this process you find one or more trap coils that appear
> to be heavily coated with carbon powder or residue, you've got an
> arced-over trap that needs replacement. This can be the result of too
> much power, an insulation failure, or using it on a non-supported band
> (such as 17m).
>
> Hope this helps.
>
> Neil, K1VY
>
> email to K1VY@arrl.net
>
> P.S. On my A4s I still occasionally see some motion of the resonance
> center point in icy conditions, what I understand is that the ice
> makes the antenna look electrically longer, thus the resonant
> frequency decreases until the ice melts off at some point.
>
>
>
> On Wed, 23 Jan 2002 18:15:48 GMT, "Alf Green"
> <alf.green@honeywell.com> wrote:
>
> >Greetings,
> >
> >Sometime in the next few months, before it gets too hot to climb the tower,
> >I want to put my A4S (20/15/10 4-ele beam) back in the air. It worked fine
> >when I took it down, but has been in pieces laying on my roof for several
> >years, and some of the traps are showing signs of cracking on the end seals.
> >
> >Although they have not been exposed to standing water, it's possible that
> >moisture could have crept in. I'd rather not dissemble them unnecessarily,
> >so am looking for a way to test them as is.
> >
> >I have the original datasheet for the A4S but it does not include any
> >details. Neither is Cushcraft forthcoming with anything useful (not that I
> >would really expect them to under the circumstances). I expect each inner
> >trap to be a parallel-resonant circuit at 28MHz, and the outer ones to be
> >resonant at 21MHz, but that may be too simplistic. I'd also like to get some
> >assurance that the power handling hasn't been degraded, even though I

> >probably wont be running much over 100w.
> >
> >I have a good selection of test equipment, I just need some ideas as to what
> >exactly I need to look for.
> >
> >All suggestions welcome.
> >
> >73 Alf NU8I
> >Scottsdale AZ DM43an
> >
> >

Neil, which "end" of the traps are to point "inwards" in reference to the dimpled tube end and formed inward screw end? Meaning if you held the trap with say the "dimpled" end on the left side, which if the ends are to point inwards towards the boom/mast?

315. Re: Testing Cushcraft traps

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-02 21:26:36 UTC
From: "J. C. Mc Laughlin" <JCM@LenTel.Com>
Message-ID: <C7adnVgxIL2WRx_MnZ2dnUVZ_qCdnZ2d@bright.net>
Source record: 88

This eleven year old message sure contains some useful information.
73, Mac N8TT

wrote in message
news:9ea7f6aa-1b6b-464c-ab18-ff2918915c25@googlegroups.com...

On Wednesday, January 23, 2002 3:37:52 PM UTC-5, Neil wrote:
> (The following is provided as an opinion only, and without warranty of
> ANY kind. You take all the risk. If you are NOT comfortable doing
> this job, STOP, you may ruin your antenna. That being said, my own
> results have been very good...)
>
> Hi Alf;
>
> I was in the same situation as you when I embarked on a project of A4S
> testing and recovery. It's been a long slow path, but the end result
> is very satisfying. The unit I have includes the 40 meter add-on kit.
>
> As you, I found that the "support" at Cushcraft amounted to little
> more than a junior employee telling me he didn't know of any trap
> problems...YEAH RIGHT!
>
> You need to decide what makes the most sense for you. You can
> properly restore the antenna, or try to band-aid it hoping for the
> best. If you do the latter, depending on your weather and climate,
> you will likely see regular trap failures, partucularly in wet or icy
> conditions. Sometimes they will clear up when things dry out again,
> but sometimes you can get internal arcing or opens, in which case the
> only remedy is to bring the whole antenna down and work on it. If you
> don't mind doing this every six months or so, then you're more
> energetic than I.
>
> The resonant points of the traps are neither intutive nor easy to
> measure with any certainty. In my experience the best approach to
> dealing with this antenna is to open up EVERY trap and give it a
> thorough going-over (described below). If you do this, then the
> chances are very good that you've got at least several years of
> worry-free operation, hurricanes notwithstanding.
>
> So here goes:
>
> 1. During disassembly, mark each trap according to its type, TA, TK,
> etc. with a black magic marker on the outside of the metal can. Also
> draw an arrow -> pointing toward the boom (this is not really
> necessary, but can help avoid a backwards mounted trap).

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> 2. Pick a trap to begin with and remove the end caps. Note whether
> they are cracked or dried. (You'll want to order a bunch of
> replacements from Cushcraft, be sure to order a few extras.)
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> 3. Notice that the trap has on one end a region of the can that has
> been stamp-formed inwardly, and has a screw attaching it to the
> element tubing (remove this screw and save it). The other end of the
> can has a few dimples that have been impressed into it. These dimples
> rest in a groove in a spacer doughnut inside the end of the trap, and
> will make disassembly very hard.
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> Now for the tough part...
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> pesky dimples. Don't drill any deeper than you have to, you just
> have to penetrate the aluminum can. Yes, this drilling will very
> slightly change the capacitance, but experimentally it hasn't seemed
> to matter. It's best to use a drill press for this step so you can
> better control how deep you go. Now, the discovery...telescope the
> trap "guts" and the spacer doughnut out that end of the trap, and see
> what's inside (for better or worse)!
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> trap contents, but do NOT use any solvents nor abrasives on the body
> of the coil. In most cases a soft bristle brush and a vacuum cleaner
> will do fine. Compressed air is also a help.
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> thread-cutting screw. This interface is where most of the contact
> problems occur, due to the copper-to-aluminum interface.
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> rusted/corroded warranting replacement. If so, get a stainless screw
> of the same design and size. Now lift the end of the copper coil
> slightly and abrade the two contacting surfaces (one copper, one
> aluminum) using a fine grit double sided emery file (or a diamond-dust
> double-sided nail file). You can also clean up the top of the copper
> wire (just at that point) so the screw will have a clean contact area
> to clamp onto. Using Penetrox-A, grease up all of the contact areas
> thoroughly, and tightly reinstall the two hold-down screws (don't
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> to get Penetrox on the coil windings, nor anywhere else for that
> matter (not easy).
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> intact) or with new ones. Now, ohm out the trap, you should see a
> small fraction of 1 ohm, in other words a DC short. If you see any
> appreciable resistance, something's wrong, don't continue till you
> resolve it.
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> 9. Repeat with all traps.
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> the tubing joints prior to insertion.
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> Once you do this, and get the antenna tuned up to the band centers you
> like, it should be very stable for a very long time.
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> Note: If in this process you find one or more trap coils that appear
> to be heavily coated with carbon powder or residue, you've got an
> arced-over trap that needs replacement. This can be the result of too
> much power, an insulation failure, or using it on a non-supported band
> (such as 17m).
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> Hope this helps.
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> Neil, K1VY
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> email to K1VY@arrl.net
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> P.S. On my A4s I still occasionally see some motion of the resonance
> center point in icy conditions, what I understand is that the ice
> makes the antenna look electrically longer, thus the resonant
> frequency decreases until the ice melts off at some point.
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> On Wed, 23 Jan 2002 18:15:48 GMT, "Alf Green"
> <alf.green@honeywell.com> wrote:
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> >Greetings,
> >
> >Sometime in the next few months, before it gets too hot to climb the
> >tower,
> >I want to put my A4S (20/15/10 4-ele beam) back in the air. It worked
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> >when I took it down, but has been in pieces laying on my roof for several
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> >seals.
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> >Although they have not been exposed to standing water, it's possible that
> >moisture could have crept in. I'd rather not dissemble them

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> >so am looking for a way to test them as is.
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> >trap to be a parallel-resonant circuit at 28MHz, and the outer ones to be
> >resonant at 21MHz, but that may be too simplistic. I'd also like to get
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> >assurance that the power handling hasn't been degraded, even though I
> >probably wont be running much over 100w.
> >
> >I have a good selection of test equipment, I just need some ideas as to
> >what
> >exactly I need to look for.
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> >All suggestions welcome.
> >
> >73 Alf NU8I
> >Scottsdale AZ DM43an
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> >

Neil, which "end" of the traps are to point "inwards" in reference to the dimpled tube end and formed inward screw end? Meaning if you held the trap with say the "dimpled" end on the left side, which if the ends are to point inwards towards the boom/mast?

J. C. Mc Laughlin
Michigan U.S.A.

316. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-03 23:49:04 UTC
From: tom <news4792@taring.org>
Message-ID: <vsqdnTj5Uo9w0RnMnZ2dnUVZ_rOdnZ2d@iphouse.net>
Source record: 89

On 5/1/2013 3:47 AM, Szczepan Bialek wrote:
> "tom" <news4792@taring.org> napisal w wiadomosci
> news:-eydncVkCbzB6x3MnZ2dnUVZ_q-dnZ2d@iphouse.net...
>>>
>>
>> If you pick the text you posted here yes, he was an idiot by your
>> definition. He wasn't really an idiot, unlike you.
>>
>> Because the earth is NOT "in these cases the earth is for all practical
>> purposes connected to the antennae" for well over 99% of all the antennas
>> in use today. Because it doesn't need to be.
>
> You simply do not know that:
> "In electronic circuit theory, a "ground" is usually idealized as an
> infinite source or sink for charge, which can absorb an unlimited amount of
> current without changing its potential." and,

But the "ground" you are referring to in this paragraph is NOT the one
you are in the next. One is an essentially infinite sink, and the other
ignores that property entirely.

So you are arguing with yourself here.

>
> "The use of the term ground (or earth) is so common in electrical and
> electronics applications that circuits in portable electronic devices such
> as cell phones and media players as well as circuits in vehicles may be
> spoken of as having a "ground" connection without any actual connection to
> the Earth. This is usually a large conductor attached to one side of the
> power supply (such as the "ground plane" on a printed circuit board) which
> serves as the common return path for current from many different components
> in the circuit." From:
> http://en.wikipedia.org/wiki/Ground_(electricity)
>
> The same was wrote by Marconi.
> S*
>
>

tom
K0TAR

317. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 00:32:03 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <km1knp$qo7$1@dont-email.me>
Source record: 90

```
"Szczepan Bialek" wrote in message
news:5180d4f9$0$1219$65785112@news.neostrada.pl...

"Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
news:klp6iv$1sq$1@dont-email.me...
>
>
> "Szczepan Bialek" wrote in message
> news:517ffec2$0$26707$65785112@news.neostrada.pl...
>
>
>>
>> So with direct coax connection, one leg radiates and the other leg is
>> ground?
>
> # Yes.
>>
>> Would you be willing to touch the end of the "ground"/"radial" wire while
>> transmitting?
>
> # The electron density changes periodically in the both legs (while
> # transmitting).
> # Are the voltages equal in the both legs?
>
> But the question was: if the half of the antenna connected to the coax is
> ground, would you be willing to touch the end of that half while RF power
> is supplied to the center conductor connected half of the antenna?
>
> That would be a good way of verifying your theory.

# It is not my theory. Somebody wrote:
# "H. Horizontal, unbalanced antennas, such as a long wire or random wire,
# need an RF Ground wire that should be 10-15% longer than the antenna wire
# itself. This is often called a counterpoise. The RF ground wire in this
case
# can be laid out in many ways, just so long as it does not cross over
itself
# to form a loop. Indoors, such wires are often run under carpets or along
# walls, out of windows, or anywhere else convenient. This wire will often
# have large RF voltages on it, so it should be kept away from people or
# insulated to prevent contact." From:
# http://www.sgcworld.com/radialstechnote.html

# Your "dipoles" are "horizontal, unbalanced antennas". The radial or
# counterpoise "should be kept away from people or insulated to prevent
```

contact."

It appears that your reference above from SGC contradicts your single radial assertion.

For a half wave antenna broken in the center, you claim that the half connected to the coax braid is a radial.
If it is a radial, why does it have high voltage at the end, behaving like a dipole?

318. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 05:56:39 UTC
From: vu2nan <vu2nan.bca5c69@radiobanter.com>
Message-ID: <vu2nan.bca5c69@radiobanter.com>
Source record: 91

I wonder if I have gone nuts going through this thread!

73,

Nandu.

--
vu2nan

319. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 08:12:45 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <5184c2ff$0$26693$65785112@news.neostrada.pl>
Source record: 92

"tom" <news4792@taring.org> napisal w wiadomosci
news:vsqdnTj5Uo9w0RnMnZ2dnUVZ_rOdnZ2d@iphouse.net...
> On 5/1/2013 3:47 AM, Szczepan Bialek wrote:
>>
>> You simply do not know that:
>> "In electronic circuit theory, a "ground" is usually idealized as an
>> infinite source or sink for charge, which can absorb an unlimited amount
>> of
>> current without changing its potential." and,
>
> But the "ground" you are referring to in this paragraph is NOT the one you
> are in the next. One is an essentially infinite sink, and the other
> ignores that property entirely.
>
> So you are arguing with yourself here.

The both paragraph are wrote by the same Author.
>
>>
>> "The use of the term ground (or earth) is so common in electrical and
>> electronics applications that circuits in portable electronic devices
>> such
>> as cell phones and media players as well as circuits in vehicles may be
>> spoken of as having a "ground" connection without any actual connection
>> to
>> the Earth. This is usually a large conductor attached to one side of the
>> power supply (such as the "ground plane" on a printed circuit board)
>> which
>> serves as the common return path for current from many different
>> components
>> in the circuit." From:
>> http://en.wikipedia.org/wiki/Ground_(electricity)

The "large conductor, "ground plane" or "radials" are in the air or in the
space.
The air or the space are the "infinite source or sink for charge".

I assume that you know that a conductor gain/loss the charge in the
air/space.
But the conductor must be large enough.
In your "dipole" one radial is enugh but in a big station must be much more.
>>
>> The same was wrote by Marconi.
S*

320. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 08:34:21 UTC
From: Szczepan Bialek <sz.bialek@wp.pl>
Message-ID: <5184c80f$0$1254$65785112@news.neostrada.pl>
Source record: 93

```
"Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
news:km1knp$qo7$1@dont-email.me...
>
>
> # It is not my theory. Somebody wrote:
> # "H. Horizontal, unbalanced antennas, such as a long wire or random wire,
> # need an RF Ground wire that should be 10-15% longer than the antenna
> wire
> # itself. This is often called a counterpoise. The RF ground wire in this
> case
> # can be laid out in many ways, just so long as it does not cross over
> itself
> # to form a loop. Indoors, such wires are often run under carpets or along
> # walls, out of windows, or anywhere else convenient. This wire will often
> # have large RF voltages on it, so it should be kept away from people or
> # insulated to prevent contact." From:
> # http://www.sgcworld.com/radialstechnote.html
>
> # Your "dipoles" are "horizontal, unbalanced antennas". The radial or
> # counterpoise "should be kept away from people or insulated to prevent
> # contact."
>
> It appears that your reference above from SGC contradicts your single
> radial assertion.
>
> For a half wave antenna broken in the center, you claim that the half
> connected to the coax braid is a radial.
> If it is a radial, why does it have high voltage at the end, behaving like
> a dipole?

""Marconi, who discovered if he attached one terminal of his transmitter to
a
wire suspended in the air and the other to the Earth, he could transmit for
longer distances".

Each transmittel as a source of AC produces the high voltage at the both
ends.
If the one end is in the soil you have the monopooe antenna.

But next Marconi discovered that the radials are better than the soil.

You should understand that 120 radials have lower voltage than one radiator.
Also one radial from your "dipole" connetced in series with the shield has
lower voltage.
```

Have you posibility to measure the VSWR on the both legs your "dipole"?
S*

321. Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 12:26:09 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <E77ht.13574$YJ.12011@newsfe11.iad>
Source record: 94

Hi

I have the Realistic Programmable scanner with 200 programable channels. A lot of range there like 6 m, 2 m, 70 cm, marine, etc etc etc, wide range.

I want to put up an external antenna that I can hook it up to its own BNC connection for external antenna. I believe the higher the better.

Which is better to run a bare copper wire longest and highest to connect it to the BNC center? Or should I use coax and splice the center copper feed to a certain length from its shield and just get that piece of the antenna the highest possible? Would it make better receive sense to simply use one leg of the 16ga copper wire with jacket that I have and use for dipoles?

If I use an adapter (SO239 x BNC) and hook the scanner up to my Alpha Delta DX-CC which has a lot of exposed copper very high and very long and available, Is that a better receive antenna than would be another piece of coax spliced at a certain length and get that up there higher?

Simply for scanner of course, nothing transmit,

Appreciate any comments on this, cheap or otherwise,

thanks

73s

322. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 12:45:08 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkoa0mk.q3f.nomail@xs8.xs4all.nl>
Source record: 95

Tom <abraa@cadabraa.ca> wrote:
> Hi
>
> I have the Realistic Programmable scanner with 200 programable channels. A
> lot of range there like 6 m, 2 m, 70 cm, marine, etc etc etc, wide range.
>
> I want to put up an external antenna that I can hook it up to its own BNC
> connection for external antenna. I believe the higher the better.
>
> Which is better to run a bare copper wire longest and highest to connect it
> to the BNC center? Or should I use coax and splice the center copper feed to
> a certain length from its shield and just get that piece of the antenna the
> highest possible? Would it make better receive sense to simply use one leg
> of the 16ga copper wire with jacket that I have and use for dipoles?
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> If I use an adapter (SO239 x BNC) and hook the scanner up to my Alpha Delta
> DX-CC which has a lot of exposed copper very high and very long and
> available, Is that a better receive antenna than would be another piece of
> coax spliced at a certain length and get that up there higher?
>
> Simply for scanner of course, nothing transmit,
>
> Appreciate any comments on this, cheap or otherwise,

For VHF use it is not a good idea to connect a very long bare wire to
the antenna connector, because only a short part of the wire close
to the receiver will be active and thus you have an indoor antenna
even when the wire runs outside.

As you write, the higher the better. So it is better to run a decent
quality coax to outside and construct a simple antenna connected to
the end of it. Generally, the thicker the coax the better, but no
need to over-spend on this.

For receive only, a random length (in the ballpark of 1/2 wavelength)
vertical dipole is good enough. You can make it a true dipole
or you can use some "groundplane" configuration (one quarter wavelength
pointing upward and connected to the coax center, and three or four
quarter wavelength rods slanting downward and connected to the braid).
The latter may be more convenient when you want to put it on top of
a short pole.

Indeed, you can also just strip the end of the coax and fold back the
braid over the end of the coax to form a halfwave dipole, and put
the whole thing in a plastic tube.

When looking inside commercially available scanner antennas, you will often find just a copper wire inside the plastic stick. Often there has been an attempt to make it more wideband by winding it in the form of a couple of coils (3 turns or so) every 10 inch or so, but if that really makes any difference in the results is to be seen.

323. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 15:02:01 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <9gkf5a-bde.ln1@mail.specsol.com>
Source record: 96

Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> "tom" <news4792@taring.org> napisal w wiadomosci
> news:vsqdnTj5Uo9w0RnMnZ2dnUVZ_rOdnZ2d@iphouse.net...
>> On 5/1/2013 3:47 AM, Szczepan Bialek wrote:
>>>
>>> You simply do not know that:
>>> "In electronic circuit theory, a "ground" is usually idealized as an
>>> infinite source or sink for charge, which can absorb an unlimited amount
>>> of
>>> current without changing its potential." and,
>>
>> But the "ground" you are referring to in this paragraph is NOT the one you
>> are in the next. One is an essentially infinite sink, and the other
>> ignores that property entirely.
>>
>> So you are arguing with yourself here.
>
> The both paragraph are wrote by the same Author.

Irrelevant.

You are incapable of understanding that the word "ground" can refer to
several different things.

>>> "The use of the term ground (or earth) is so common in electrical and
>>> electronics applications that circuits in portable electronic devices
>>> such
>>> as cell phones and media players as well as circuits in vehicles may be
>>> spoken of as having a "ground" connection without any actual connection
>>> to
>>> the Earth. This is usually a large conductor attached to one side of the
>>> power supply (such as the "ground plane" on a printed circuit board)
>>> which
>>> serves as the common return path for current from many different
>>> components
>>> in the circuit." From:
>>> http://en.wikipedia.org/wiki/Ground_(electricity)
>
> The "large conductor, "ground plane" or "radials" are in the air or in the
> space.
> The air or the space are the "infinite source or sink for charge".

Nope, they are not.

You are incapable of understanding that the word "ground" can refer to
several different things.

> I assume that you know that a conductor gain/loss the charge in the
> air/space.
> But the conductor must be large enough.
> In your "dipole" one radial is enugh but in a big station must be much more.

Babbling gibberish

>>> The same was wrote by Marconi.

It doesn't matter a lot what Marconi wrote as a lot of the things he wrote
were later discoved to be wrong or only apply in limited situations.

--
Jim Pennino

324. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 15:06:04 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <snkf5a-bde.ln1@mail.specsol.com>
Source record: 97

```
Szczepan Bialek <sz.bialek@wp.pl> wrote:
>
> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
> news:km1knp$qo7$1@dont-email.me...
>>
>>
>> # It is not my theory. Somebody wrote:
>> # "H. Horizontal, unbalanced antennas, such as a long wire or random wire,
>> # need an RF Ground wire that should be 10-15% longer than the antenna
>> wire
>> # itself. This is often called a counterpoise. The RF ground wire in this
>> case
>> # can be laid out in many ways, just so long as it does not cross over
>> itself
>> # to form a loop. Indoors, such wires are often run under carpets or along
>> # walls, out of windows, or anywhere else convenient. This wire will often
>> # have large RF voltages on it, so it should be kept away from people or
>> # insulated to prevent contact." From:
>> # http://www.sgcworld.com/radialstechnote.html
>>
>> # Your "dipoles" are "horizontal, unbalanced antennas". The radial or
>> # counterpoise "should be kept away from people or insulated to prevent
>> # contact."
>>
>> It appears that your reference above from SGC contradicts your single
>> radial assertion.
>>
>> For a half wave antenna broken in the center, you claim that the half
>> connected to the coax braid is a radial.
>> If it is a radial, why does it have high voltage at the end, behaving like
>> a dipole?
>
> ""Marconi, who discovered if he attached one terminal of his transmitter to
> a
> wire suspended in the air and the other to the Earth, he could transmit for
> longer distances".

For certain types of antennas.

Most of the antennas that exist today did not exist in Marconi'e lifetime.

> Each transmittel as a source of AC produces the high voltage at the both
> ends.

Both ends of what?
```

> If the one end is in the soil you have the monopooe antenna.

Maybe.

> But next Marconi discovered that the radials are better than the soil.

Only under certain conditions.

> You should understand that 120 radials have lower voltage than one radiator.

Babbling nonsense.

> Also one radial from your "dipole" connetced in series with the shield has
> lower voltage.

Babbling nonsense.

> Have you posibility to measure the VSWR on the both legs your "dipole"?

This is an idiotic question that shows you haven't the slightest clue
how antennas work.

--
Jim Pennino

325. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 15:57:07 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <km3au7efs1@dont-email.me>
Source record: 98

"vu2nan" wrote in message news:vu2nan.bca5c69@radiobanter.com...

>I wonder if I have gone nuts going through this thread!

>73,

>Nandu.

LOL, but you must admit there is more traffic on the group than before this thread :)

Wayne
W5GIE

326. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 16:52:51 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <gleao8ps0d8n90c2vn8rdl12l4sggqncmu@4ax.com>
Source record: 99

On Sat, 4 May 2013 08:26:09 -0400, "Tom" <abraa@cadabraa.ca> wrote:

>I have the Realistic Programmable scanner with 200 programable channels. A
>lot of range there like 6 m, 2 m, 70 cm, marine, etc etc etc, wide range.

Realistic scanners have model numbers. Could I trouble you to
disclose the exact model number? Do you have a tower?

>I want to put up an external antenna that I can hook it up to its own BNC
>connection for external antenna. I believe the higher the better.

Forget about using long wire antennas as a scanner antenna. At
VHF/UHF, long wires look more like big RF chokes. It's unlikely to
hear much connected to an HF antenna.

There are numerous scanner antennas on the market. If you have a
tower for your HF antenna, you also should have room for a discone,
"spider", trapped vertical, or something similar. I don't know
exactly what to recommend as broadband antennas are always a
compromise between gain, bandwidth, vertical radiation takeoff angle,
size, etc. Something on this list should work (except for the
handheld and mobile scanner antennas).
<http://www.universal-radio.com/catalog/scanants.html>
RG-58a/u or RG-58c/u to between the scanner and antenna will probably
need to purchases seperately. Attach your own BNC or UFH connectors.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

327. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 18:40:38 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <s8R6izCmYVhRFwgy@g3ohx.demon.co.uk>
Source record: 100

```
In message <snkf5a-bde.ln1@mail.specsol.com>, jimp@specsol.spam.sux.com
writes
>Szczepan Bialek <sz.bialek@wp.pl> wrote:
>>
>> "Wayne" <mygarbagecan@verizon.net> napisal w wiadomosci
>> news:km1knp$qo7$1@dont-email.me...
>>>
>>>
>>> # It is not my theory. Somebody wrote:
>>> # "H. Horizontal, unbalanced antennas, such as a long wire or random wire,
>>> # need an RF Ground wire that should be 10-15% longer than the antenna
>>> wire
>>> # itself. This is often called a counterpoise. The RF ground wire in this
>>> case
>>> # can be laid out in many ways, just so long as it does not cross over
>>> itself
>>> # to form a loop. Indoors, such wires are often run under carpets or along
>>> # walls, out of windows, or anywhere else convenient. This wire will often
>>> # have large RF voltages on it, so it should be kept away from people or
>>> # insulated to prevent contact." From:
>>> # http://www.sgcworld.com/radialstechnote.html
>>>
>>> # Your "dipoles" are "horizontal, unbalanced antennas". The radial or
>>> # counterpoise "should be kept away from people or insulated to prevent
>>> # contact."
>>>
>>> It appears that your reference above from SGC contradicts your single
>>> radial assertion.
>>>
>>> For a half wave antenna broken in the center, you claim that the half
>>> connected to the coax braid is a radial.
>>> If it is a radial, why does it have high voltage at the end, behaving like
>>> a dipole?
>>
>> ""Marconi, who discovered if he attached one terminal of his transmitter to
>> a
>> wire suspended in the air and the other to the Earth, he could transmit for
>> longer distances".
>
>For certain types of antennas.
>
>Most of the antennas that exist today did not exist in Marconi'e lifetime.
>
>> Each transmittel as a source of AC produces the high voltage at the both
```

>> ends.
>
>Both ends of what?
>
>> If the one end is in the soil you have the monopooe antenna.
>
>Maybe.
>
>> But next Marconi discovered that the radials are better than the soil.
>
>Only under certain conditions.
>
>> You should understand that 120 radials have lower voltage than one radiator.
>
>Babbling nonsense.
>
>> Also one radial from your "dipole" connetced in series with the shield has
>> lower voltage.
>
>Babbling nonsense.
>
>> Have you posibility to measure the VSWR on the both legs your "dipole"?
>
>This is an idiotic question that shows you haven't the slightest clue
>how antennas work.
>
Actually, some of the amusing babbling nonsense does occasionally have a small grain of sense. And even if it obviously IS nonsense, can we always say precisely why it is?

If a dipole is fed directly with coax, is the power (voltage and current) into each leg the same? If not, why not?

Again, if a dipole is fed directly with coax, and if you could insert an SWR meter at the feed into each leg, would the two readings be the same. If not, why not?
--
Ian

328. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 19:04:49 UTC
From: jimp@specsol.spam.sux.com
Message-ID: <hn2g5a-hqf.ln1@mail.specsol.com>
Source record: 201

Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote:

> Actually, some of the amusing babbling nonsense does occasionally have a
> small grain of sense. And even if it obviously IS nonsense, can we
> always say precisely why it is?

There is usually some small bit of reality in the stuff this idiot posts,
but from that small bit he always makes giant leaps into the land of
nonsense.

Ye, we can say why his babbling is nonsense but few have the huge amount
of time or the inclination to do so.

> If a dipole is fed directly with coax, is the power (voltage and
> current) into each leg the same? If not, why not?
>
> Again, if a dipole is fed directly with coax, and if you could insert an
> SWR meter at the feed into each leg, would the two readings be the same.
> If not, why not?

SWR into a leg has no meaning.

You may as well be asking how to remove the bones from ice cream.

--
Jim Pennino

329. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 19:48:22 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <eCdht.69898$oP1.11171@newsfe08.iad>
Source record: 202

Yes, I have the tower and have a bracket that extends to the side about 4 ft
and this antenna will be at the end of that extension.

Realistic 2037.

I see those links for those scanner antennas and think that one from 25 mhz
to 1000 ish is suitable.

I see a lot of them have ground planes or are all those elements part of the
center wire in the bnc?

I have an old 2m 70cm diamond antenna with gnd planes, Suppose that would
work also? But someone gave it to me because it didn't work so might take a
closer look at it.

thx
73s

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:gleao8ps0d8n90c2vn8rdl12l4sggqncmu@4ax.com...
> On Sat, 4 May 2013 08:26:09 -0400, "Tom" <abraa@cadabraa.ca> wrote:
>
>>I have the Realistic Programmable scanner with 200 programable channels. A
>>lot of range there like 6 m, 2 m, 70 cm, marine, etc etc etc, wide range.
>
> Realistic scanners have model numbers. Could I trouble you to
> disclose the exact model number? Do you have a tower?
>
>>I want to put up an external antenna that I can hook it up to its own BNC
>>connection for external antenna. I believe the higher the better.
>
> Forget about using long wire antennas as a scanner antenna. At
> VHF/UHF, long wires look more like big RF chokes. It's unlikely to
> hear much connected to an HF antenna.
>
> There are numerous scanner antennas on the market. If you have a
> tower for your HF antenna, you also should have room for a discone,
> "spider", trapped vertical, or something similar. I don't know
> exactly what to recommend as broadband antennas are always a
> compromise between gain, bandwidth, vertical radiation takeoff angle,
> size, etc. Something on this list should work (except for the
> handheld and mobile scanner antennas).
> <http://www.universal-radio.com/catalog/scanants.html>
> RG-58a/u or RG-58c/u to between the scanner and antenna will probably
> need to purchases seperately. Attach your own BNC or UFH connectors.
>

>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558
>

330. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 20:20:09 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <6898f435-8f37-467c-9f7c-8c31ca2b56b6@googlegroups.com>
Source record: 203

On Saturday, May 4, 2013 2:26:09 PM UTC+2, Tom wrote:
> Hi
>
>
>
> I have the Realistic Programmable scanner with 200 programable channels. A>
> lot of range there like 6 m, 2 m, 70 cm, marine, etc etc etc, wide range.
>
> I want to put up an external antenna that I can hook it up to its own BNC
> connection for external antenna. I believe the higher the better.
>
> Which is better to run a bare copper wire longest and highest to connect it
> to the BNC center? Or should I use coax and splice the center copper feed to
> a certain length from its shield and just get that piece of the antenna the
>
> highest possible? Would it make better receive sense to simply use one leg
> of the 16ga copper wire with jacket that I have and use for dipoles?
>
>
>
> If I use an adapter (SO239 x BNC) and hook the scanner up to my Alpha Delta
> DX-CC which has a lot of exposed copper very high and very long and
> available, Is that a better receive antenna than would be another piece of
> coax spliced at a certain length and get that up there higher?
>
> Simply for scanner of course, nothing transmit,
>
> Appreciate any comments on this, cheap or otherwise,
>
>
> thanks
>
>
> 73s

If you want to receive from say 145 MHz to 500 MHz, I would go for a descent cable (foam dielectric) if the length exceeds say 5m. Below this length I would just use standard RG 58. A bare or insulated wire into the center of the antenna input will not work well.

I would not recommend any thin wire antennas (including whips) as these are narrow band, so it will only work well on a single frequency band (for example VHF airband, but not together with VHF Marine) . When you want to buy something, I would go for the discone antenna if you really want to receive from 145 MHz up to around 500 MHz.

A wide band antenna in combination with strong signals nearby may result in overload to the RF input circuitry of your scanner. You may arrive into a situation that a better antenna will give worse results due to overloading the RF input circuitry. If you have limited or no experience, you may not recognize this.

There are other solutions: If you want to receive a limited amount of frequency bands (for example 2 m and 70 cm), you can buy dual-band antennas for certain frequency bands. Other option is to use separate antennas for each band, but you cannot connect them all together to one cable without a special frequency selective combiner.

Wim
PA3DJS
www.tetech.nl
remove abc first in case of PM

331. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 20:23:51 UTC
From: Rob <nomail@example.com>
Message-ID: <slrnkoarin.nc8.nomail@xs8.xs4all.nl>
Source record: 204

Tom <abraa@cadabraa.ca> wrote:
> I have an old 2m 70cm diamond antenna with gnd planes, Suppose that would
> work also? But someone gave it to me because it didn't work so might take a
> closer look at it.

A dualband transmit antenna may work less well as a wideband receive
antenna than a plain dipole, as it is constructed to match well and
even provide gain at two distinct bands, and the methods used to achieve
this may result in nulls at other frequencies. But you can always
try it and find out how it works at the bands you are interested in.

332. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 20:38:14 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <co2dnYBUAIsr7BjMnZ2dnUVZ_uCdnZ2d@earthlink.com>
Source record: 205

"Tom" <abraa@cadabraa.ca> wrote in message
news:E77ht.13574$YJ.12011@newsfe11.iad...
> Hi
>
> I have the Realistic Programmable scanner with 200 programable channels. A
> lot of range there like 6 m, 2 m, 70 cm, marine, etc etc etc, wide range.
>
> I want to put up an external antenna that I can hook it up to its own BNC
> connection for external antenna. I believe the higher the better.
>
> Which is better to run a bare copper wire longest and highest to connect
> it to the BNC center? Or should I use coax and splice the center copper
> feed to

You will not receive much with a long bare copper wire.

Get some coax, rg8x is good, the rg 6 type is also good and usually cheap. Don't worry about the 70 ohm impedance of the rg-6 as the impedance is not going to be 50 ohms anyway over much of the frequecny range. The lmr400 type is beter, but I doubt that you will notice the differance if the length is around 100 feet or less. Not worth the big price differance for a scanner in many cases. The only problem with the rg6 may be the connectors as the shield is usually aluminum or a material that will not take solder. The crimp connectors are fine.

For the outside antenna, a discone type is often used. Really for a broad band reception any ground plane or colinear will probably give you good reception over a wide band. After all, the short antenna that usually comes with the scanners often pick up many signals.

333. Re: Anyone know where I can find plans for an artificial ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-04 23:20:21 UTC
From: tom <news4792@taring.org>
Message-ID: <tKadnULPh5wsChjMnZ2dnUVZ_hadnZ2d@iphouse.net>
Source record: 206

On 5/4/2013 3:12 AM, Szczepan Bialek wrote:
> "tom" <news4792@taring.org> napisal w wiadomosci
> news:vsqdnTj5Uo9w0RnMnZ2dnUVZ_rOdnZ2d@iphouse.net...
>> On 5/1/2013 3:47 AM, Szczepan Bialek wrote:
>>>
>>> You simply do not know that:
>>> "In electronic circuit theory, a "ground" is usually idealized as an
>>> infinite source or sink for charge, which can absorb an unlimited amount
>>> of
>>> current without changing its potential." and,
>>
>> But the "ground" you are referring to in this paragraph is NOT the one you
>> are in the next. One is an essentially infinite sink, and the other
>> ignores that property entirely.
>>
>> So you are arguing with yourself here.
>
> The both paragraph are wrote by the same Author.

Yes, but they are not about the same thing. Which you obviously didn't
get, because you are using search engines to make your arguments instead
of a brain.

tom
K0TAR

334. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 01:18:08 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <3gbbo8l8th1adq1illd1blqelv3gluefrt@4ax.com>
Source record: 207

On Sat, 4 May 2013 15:48:22 -0400, "Tom" <abraa@cadabraa.ca> wrote:

>Yes, I have the tower and have a bracket that extends to the side about 4 ft
>and this antenna will be at the end of that extension.

Perfect, but not for the obvious reason. Retail discone antennas cost
$25 to $150, which seems a bit high. Mostly, it's because of the
large number of parts involved. If you have a tower and yard-arm, you
can hang a center fed vertical biconical antenna off the end, which in
my never humble opinion will work better than a discone (due to the
reduced up tilt of the vertical radiation pattern) than a discone.
Discones are good for broadband, and listening to airplanes, but if
you want distance, the radiation pattern should point to the horizon,
not the sky. Something like one of these:
<https://www.google.com/search?q=biconical+antenna&tbm=isch>

>Realistic 2037.

<http://www.rigpix.com/rs-realistic/realistic_pro2037.htm>
Made by GRE starting in about 1996. It has a marginal front end
design that is easily overloaded by strong signals and will produce
intermod mixes with little effort. The "ATT" for attenuation switch
is an obvious clue. If you hear obvious intermod, you may want to
insert a 1/4 wave stub notch filter between the antenna and receiver
to get rid of strong paging junk and such.
<http://dl4xav.sysve.de/coax.filter/coax-filter.html>

The more strange looking and ugly the antenna, the better it works.

>I see a lot of them have ground planes or are all those elements part of the
>center wire in the bnc?

The bottom angled elements are at ground potential. The flat top
"hat' is connected to the center wire of the UHF connector. If you
replace the flat top hat, with a mirror image of the ground elements,
you have an instant biconical antenna.

>I have an old 2m 70cm diamond antenna with gnd planes, Suppose that would
>work also? But someone gave it to me because it didn't work so might take a
>closer look at it.

A dual band antenna will work on 2m and 70cm, and little else. You
can probably hear something on the adjacent frequencies, but at more
than a few MHz away, such an antenna is going to be comatose. If you
use your scanner mostly for these ham bands, put a ground plane under
it, as if it were mounted on a vehicle, and attach it to your
yard-arm. If that's too messy, several 1/4 wave at 2m horizontal

ground radials will probably suffice.

Incidentally, don't toss the antenna. Diamond make good antennas and
it's probably worth your time to determining why it didn't work.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

335. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 11:57:59 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <dPrht.9406$yH4.7601@newsfe01.iad>
Source record: 208

Thanks for the advice.

The 2m 70cm old antenna someone gave me is a Diamond X200 I believe. It is about 2.4 meters long with a connection in the middle. It was full of water and for many years, I took it apart yesterday and emptied the water and green stuff out and sanded the entier top part of the element and coils. I will de-oxit it and put it back together and seal it better. I cannot get the bottom length of antenna out of the fiberglass shell so I will leave that greenish but I noticed there was continuity between the outside shield of the S0239 connector and the antenna and not continuity between the center of the Coax connector and the antenna. I thought the center coax would connect with the antenna and the shield would connect with the gnd planes. Is that normal?

From the center of the SO239 connector on the antenna there is no continuity between anything. Only continuity between the threads of the SO239 and the antenna length. After I put it all together I will use the AV600 meter to tests its SWR with the 2m70cm rig to see if it is ok.

That bottom fiberglass piece looks glued in there pretty good I don't want to break the seal , I think the water might be getting in from that half way connector.

Can this antenna be modified for broader band scanner use? Most of my interests in the scanning will be the marine bands (156 ish megs) and VHF and UHF ham bands anyway.

Thanks gents for the advice,,,

73s

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:co2dnYBUAIsr7BjMnZ2dnUVZ_uCdnZ2d@earthlink.com...
>
> "Tom" <abraa@cadabraa.ca> wrote in message
> news:E77ht.13574$YJ.12011@newsfe11.iad...
>> Hi
>>
>> I have the Realistic Programmable scanner with 200 programable channels.
>> A lot of range there like 6 m, 2 m, 70 cm, marine, etc etc etc, wide
>> range.
>>
>> I want to put up an external antenna that I can hook it up to its own BNC
>> connection for external antenna. I believe the higher the better.
>>
>> Which is better to run a bare copper wire longest and highest to connect

>> it to the BNC center? Or should I use coax and splice the center copper
>> feed to
>
> You will not receive much with a long bare copper wire.
>
> Get some coax, rg8x is good, the rg 6 type is also good and usually cheap.
> Don't worry about the 70 ohm impedance of the rg-6 as the impedance is not
> going to be 50 ohms anyway over much of the frequecny range. The lmr400
> type is beter, but I doubt that you will notice the differance if the
> length is around 100 feet or less. Not worth the big price differance for
> a scanner in many cases. The only problem with the rg6 may be the
> connectors as the shield is usually aluminum or a material that will not
> take solder. The crimp connectors are fine.
>
> For the outside antenna, a discone type is often used. Really for a broad
> band reception any ground plane or colinear will probably give you good
> reception over a wide band. After all, the short antenna that usually
> comes with the scanners often pick up many signals.
>
>
>

336. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 13:48:04 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <DsidnbCJyvOJ_hvMnZ2dnUVZ_qGdnZ2d@earthlink.com>
Source record: 209

"Tom" <abraa@cadabraa.ca> wrote in message
news:dPrht.9406$yH4.7601@newsfe01.iad...
> Thanks for the advice.
>
> The 2m 70cm old antenna someone gave me is a Diamond X200 I believe. It is
> about 2.4 meters long with a connection in the middle. It was full of
> water and for many years, I took it apart yesterday and emptied the water
> and green stuff out and sanded the entier top part of the element and
> coils. I will de-oxit it and put it back together and seal it better. I
> cannot get the bottom length of antenna out of the fiberglass shell so I
> will leave that greenish but I noticed there was continuity between the
> outside shield of the S0239 connector and the antenna and not continuity
> between the center of the Coax connector and the antenna. I thought the
> center coax would connect with the antenna and the shield would connect
> with the gnd planes. Is that normal?
>
> From the center of the SO239 connector on the antenna there is no
> continuity between anything. Only continuity between the threads of the
> SO239 and the antenna length. After I put it all together I will use the
> AV600 meter to tests its SWR with the 2m70cm rig to see if it is ok.
>
> That bottom fiberglass piece looks glued in there pretty good I don't want
> to break the seal , I think the water might be getting in from that half
> way connector.
>
> Can this antenna be modified for broader band scanner use? Most of my
> interests in the scanning will be the marine bands (156 ish megs) and VHF
> and UHF ham bands anyway.

I don't know about how this antenna is made. Some antennas have a coil between the center of the coax and shield or radials. They may also have a capacitor in series with the center of the coax and the vertical part of the antenna. This will show up as an open circuit with a simple ohmmeter.

As you are going to just use it as a receiving antenna, I would prop it up outside a few feet off the ground and see what you can hear. It may be broad enough to pick up what you want. Most any antenna a foot to 6 feet long or so will pick up plenty of strong signals in the vhf and up ranges.While some are much beter , if it picks up what you want ,then all is fine. If not, then you will have to look for a beter antenna.

I have a scanner with just the short antenna on it. I can pick up a 6 meter repeater about 10 miles away, several local 2 meter and 440 repeaters, the WX frequency and the emergency around 152 mhz. I also have antennas up outside that will pick up lots more than the scanner, but the scaner picks

up what I am most interisted in with the short whip.

337. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 14:16:51 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <tRtht.40905$Zw.37377@newsfe21.iad>
Source record: 210

I was thinking the same that there is some sort of cap or resister or lightning protection shorting component between the center and threads on that S0239 female connector. But why wouldn't there be continuity between the center and the main 2.5m copper system that is inside that antenna? I suppose once I check the SWR it will tell me that it was designed or engineered that way if there is a suitable reading on the SWR. And my ohm meter is simply a basic one. This antenna is old and seen a lot of years in the air, so not worried and am wondering if there are any modifications I can do to this antenna to make it more of a receiving antenna only for the scanner. Thanks again,,,

73s

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message news:DsidnbCJyvOJ_hvMnZ2dnUVZ_qGdnZ2d@earthlink.com...
>
> "Tom" <abraa@cadabraa.ca> wrote in message
> news:dPrht.9406$yH4.7601@newsfe01.iad...
>> Thanks for the advice.
>>
>> The 2m 70cm old antenna someone gave me is a Diamond X200 I believe. It
>> is about 2.4 meters long with a connection in the middle. It was full of
>> water and for many years, I took it apart yesterday and emptied the water
>> and green stuff out and sanded the entier top part of the element and
>> coils. I will de-oxit it and put it back together and seal it better. I
>> cannot get the bottom length of antenna out of the fiberglass shell so I
>> will leave that greenish but I noticed there was continuity between the
>> outside shield of the S0239 connector and the antenna and not continuity
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>> center coax would connect with the antenna and the shield would connect
>> with the gnd planes. Is that normal?
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>> From the center of the SO239 connector on the antenna there is no
>> continuity between anything. Only continuity between the threads of the
>> SO239 and the antenna length. After I put it all together I will use the
>> AV600 meter to tests its SWR with the 2m70cm rig to see if it is ok.
>>
>> That bottom fiberglass piece looks glued in there pretty good I don't
>> want to break the seal , I think the water might be getting in from that
>> half way connector.
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>> Can this antenna be modified for broader band scanner use? Most of my
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>> and UHF ham bands anyway.
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> a capacitor in series with the center of the coax and the vertical part of
> the antenna. This will show up as an open circuit with a simple ohmmeter.
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> outside a few feet off the ground and see what you can hear. It may be
> broad enough to pick up what you want. Most any antenna a foot to 6 feet
> long or so will pick up plenty of strong signals in the vhf and up
> ranges.While some are much beter , if it picks up what you want ,then all
> is fine. If not, then you will have to look for a beter antenna.
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> meter repeater about 10 miles away, several local 2 meter and 440
> repeaters, the WX frequency and the emergency around 152 mhz. I also have
> antennas up outside that will pick up lots more than the scanner, but the
> scaner picks up what I am most interisted in with the short whip.
>
>
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>

338. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 14:25:11 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <tqednRpV0sda9hvMnZ2dnUVZ_tqdnZ2d@earthlink.com>
Source record: 211

"Tom" <abraa@cadabraa.ca> wrote in message
news:tRtht.40905$Zw.37377@newsfe21.iad...
>I was thinking the same that there is some sort of cap or resister or
>lightning protection shorting component between the center and threads on
>that S0239 female connector. But why wouldn't there be continuity between
>the center and the main 2.5m copper system that is inside that antenna? I
>suppose once I check the SWR it will tell me that it was designed or
>engineered that way if there is a suitable reading on the SWR. And my ohm
>meter is simply a basic one. This antenna is old and seen a lot of years in
>the air, so not worried and am wondering if there are any modifications I
>can do to this antenna to make it more of a receiving antenna only for the
>scanner. Thanks again,,,
>

Tom if you go here you will see why the ohmmeter shows what it does.
http://xoomer.virgilio.it/ham-radio-manuals/a99.pdf

Notice the coils between the shield and center of the coax, and then the
capacitors between the coax and actual antenna element.

This may or may not be the case of the antenna you have as I do not know
what is acutually inside it.

339. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 15:04:34 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <7d95c$51867280$5353a19c$31597@cache100.multikabel.net>
Source record: 212

El 05-05-13 13:57, Tom escribiï¿½:
> Thanks for the advice.
>
> The 2m 70cm old antenna someone gave me is a Diamond X200 I believe.
> It is about 2.4 meters long with a connection in the middle. It was
> full of water and for many years, I took it apart yesterday and
> emptied the water and green stuff out and sanded the entier top part
> of the element and coils. I will de-oxit it and put it back together
> and seal it better. I cannot get the bottom length of antenna out of
> the fiberglass shell so I will leave that greenish but I noticed there
> was continuity between the outside shield of the S0239 connector and
> the antenna and not continuity between the center of the Coax
> connector and the antenna. I thought the center coax would connect
> with the antenna and the shield would connect with the gnd planes. Is
> that normal?
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> From the center of the SO239 connector on the antenna there is no
> continuity between anything. Only continuity between the threads of
> the SO239 and the antenna length. After I put it all together I will
> use the AV600 meter to tests its SWR with the 2m70cm rig to see if it
> is ok.
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> That bottom fiberglass piece looks glued in there pretty good I don't
> want to break the seal , I think the water might be getting in from
> that half way connector.
>
> Can this antenna be modified for broader band scanner use? Most of my
> interests in the scanning will be the marine bands (156 ish megs) and
> VHF and UHF ham bands anyway.
>
> Thanks gents for the advice,,,
>
> 73s
>

Hello Tom,

I don't know the internal construction of your antenna, but when SWR turns out to be good on 2m and 70cm, the antenna is very likely good and can be used for reception, but on 2m and 70 cm only. As Jeff also said, these antenna are narrow band and performance on VHF marine band will be well below that of a simple halve wave dipole tuned for VHF marine. It does not mean it receives nothing, but you only hear nearby stations on the 2m/70cm antenna when tuning your scanner to VHF air or VHF marine.

If you want one antenna that fits all, go for the discone, or even
better, go for the biconical antenna. I fully agree with Jeff, the
biconical dipole has better radiation pattern for your application.

When you enter biconical cebik into a search engine you may find
useful info on biconical antennas if you plan to construct your own
antenna. As your VHF and UHF bands of interest have around 3:1 ratio,
VSWR will be good enough for reception.

Wim
PA3DJS
don't forget to remove abc in case of PM

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>
> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
> news:co2dnYBUAIsr7BjMnZ2dnUVZ_uCdnZ2d@earthlink.com...
>>
>> "Tom" <abraa@cadabraa.ca> wrote in message
>> news:E77ht.13574$YJ.12011@newsfe11.iad...
>>> Hi
>>>
>>> I have the Realistic Programmable scanner with 200 programable
>>> channels. A lot of range there like 6 m, 2 m, 70 cm, marine, etc
>>> etc etc, wide range.
>>>
>>> I want to put up an external antenna that I can hook it up to its
>>> own BNC connection for external antenna. I believe the higher the
>>> better.
>>>
>>> Which is better to run a bare copper wire longest and highest to
>>> connect it to the BNC center? Or should I use coax and splice the
>>> center copper feed to
>>
>> You will not receive much with a long bare copper wire.
>>
>> Get some coax, rg8x is good, the rg 6 type is also good and usually
>> cheap. Don't worry about the 70 ohm impedance of the rg-6 as the
>> impedance is not going to be 50 ohms anyway over much of the
>> frequecny range. The lmr400 type is beter, but I doubt that you will
>> notice the differance if the length is around 100 feet or less. Not
>> worth the big price differance for a scanner in many cases. The only
>> problem with the rg6 may be the connectors as the shield is usually
>> aluminum or a material that will not take solder. The crimp
>> connectors are fine.
>>
>> For the outside antenna, a discone type is often used. Really for a
>> broad band reception any ground plane or colinear will probably give
>> you good reception over a wide band. After all, the short antenna
>> that usually comes with the scanners often pick up many signals.

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Wim
PA3DJS
www.tetech.nl
Please remove abc first in case of PM

340. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 16:12:41 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <0yvht.22594$YJ.18401@newsfe11.iad>
Source record: 213

Hi
I got the base out. An old ham buddy stopped by and we cranked and hammered that end out. The bottom section of the X200a antenna that is connected to the whip. The bottom half of the antenna out of that bottom piece of fiberglass tube. Very green as there was water sitting in there. Ok so at the base is a coil that is tapped at about 75% through it and that tapping (there are two) one to the shield part of the S0239 and one to the center of the S0239 connector. Both are broken and both look like there is a capacitor there that split apart.

Any idea what those two caps are? I think if I just clean the element up with sand paper, deoxit it and replace those caps (if that is what is there) looks like two small caps were supposed to be there or what is there could be corroded up broken caps.

Or is that little piece available online anywhere?

Or could I simply connect everything to the gnd planes or even lengthen those gnd planes and connect short everything as I only want to use as receive for the scanner. I am probably at about 3 or 4 hours cleaning this old antenna up, compared to the costs of a new one.

Thanks for your thoughts

73s

"Wimpie" <wimabctel@tetech.nl> wrote in message
news:7d95c$51867280$5353a19c$31597@cache100.multikabel.net...
> El 05-05-13 13:57, Tom escribiï¿½:
>> Thanks for the advice.
>>
>> The 2m 70cm old antenna someone gave me is a Diamond X200 I believe.
>> It is about 2.4 meters long with a connection in the middle. It was
>> full of water and for many years, I took it apart yesterday and
>> emptied the water and green stuff out and sanded the entier top part
>> of the element and coils. I will de-oxit it and put it back together
>> and seal it better. I cannot get the bottom length of antenna out of
>> the fiberglass shell so I will leave that greenish but I noticed there
>> was continuity between the outside shield of the S0239 connector and
>> the antenna and not continuity between the center of the Coax
>> connector and the antenna. I thought the center coax would connect
>> with the antenna and the shield would connect with the gnd planes. Is
>> that normal?
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>> continuity between anything. Only continuity between the threads of

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>> use the AV600 meter to tests its SWR with the 2m70cm rig to see if it
>> is ok.
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>> want to break the seal , I think the water might be getting in from
>> that half way connector.
>>
>> Can this antenna be modified for broader band scanner use? Most of my
>> interests in the scanning will be the marine bands (156 ish megs) and
>> VHF and UHF ham bands anyway.
>>
>> Thanks gents for the advice,,,
>>
>> 73s
>>
>
> Hello Tom,
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> I don't know the internal construction of your antenna, but when SWR turns
> out to be good on 2m and 70cm, the antenna is very likely good and can be
> used for reception, but on 2m and 70 cm only. As Jeff also said, these
> antenna are narrow band and performance on VHF marine band will be well
> below that of a simple halve wave dipole tuned for VHF marine. It does
> not mean it receives nothing, but you only hear nearby stations on the
> 2m/70cm antenna when tuning your scanner to VHF air or VHF marine.
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> If you want one antenna that fits all, go for the discone, or even better,
> go for the biconical antenna. I fully agree with Jeff, the biconical
> dipole has better radiation pattern for your application.
>
> When you enter biconical cebik into a search engine you may find useful
> info on biconical antennas if you plan to construct your own antenna. As
> your VHF and UHF bands of interest have around 3:1 ratio, VSWR will be
> good enough for reception.
>
> Wim
> PA3DJS
> don't forget to remove abc in case of PM
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>>
>> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
>> news:co2dnYBUAIsr7BjMnZ2dnUVZ_uCdnZ2d@earthlink.com...
>>>
>>> "Tom" <abraa@cadabraa.ca> wrote in message
>>> news:E77ht.13574$YJ.12011@newsfe11.iad...
>>>> Hi

>>>>
>>>> I have the Realistic Programmable scanner with 200 programable
>>>> channels. A lot of range there like 6 m, 2 m, 70 cm, marine, etc
>>>> etc etc, wide range.
>>>>
>>>> I want to put up an external antenna that I can hook it up to its
>>>> own BNC connection for external antenna. I believe the higher the
>>>> better.
>>>>
>>>> Which is better to run a bare copper wire longest and highest to
>>>> connect it to the BNC center? Or should I use coax and splice the
>>>> center copper feed to
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>>> You will not receive much with a long bare copper wire.
>>>
>>> Get some coax, rg8x is good, the rg 6 type is also good and usually
>>> cheap. Don't worry about the 70 ohm impedance of the rg-6 as the
>>> impedance is not going to be 50 ohms anyway over much of the
>>> frequecny range. The lmr400 type is beter, but I doubt that you will
>>> notice the differance if the length is around 100 feet or less. Not
>>> worth the big price differance for a scanner in many cases. The only
>>> problem with the rg6 may be the connectors as the shield is usually
>>> aluminum or a material that will not take solder. The crimp
>>> connectors are fine.
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>>> For the outside antenna, a discone type is often used. Really for a
>>> broad band reception any ground plane or colinear will probably give
>>> you good reception over a wide band. After all, the short antenna
>>> that usually comes with the scanners often pick up many signals.
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> Wim
> PA3DJS
> www.tetech.nl
> Please remove abc first in case of PM

341. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 17:25:55 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <gt4do8llnagdfab324c9iehkmscrpu283u@4ax.com>
Source record: 214

On Sun, 5 May 2013 07:57:59 -0400, "Tom" <abraa@cadabraa.ca> wrote:

>From the center of the SO239 connector on the antenna there is no continuity
>between anything. Only continuity between the threads of the SO239 and the
>antenna length.

Here is my lousy photos of the inside of a Diamond X50 antenna after
the former owner backed over it with his pickup truck:
<http://802.11junk.com/jeffl/antennas/Misc/slides/x50-01.html>
<http://802.11junk.com/jeffl/antennas/Misc/slides/x50.html>
My guess(tm) is that the X200 base structure is similar. As I recall,
there should be continuity between the center conductor and the lower
element. However, the crumpled brass phasing section(?) in the middle
of the antenna has no continuity through the center conductor. The
end wires go in about 2" and stop. This may be the lack of continuity
that you're seeing.

>That bottom fiberglass piece looks glued in there pretty good I don't want
>to break the seal , I think the water might be getting in from that half way
>connector.

Don't try to remove it. The fiberglass radome extends into the cast
aluminum base and is glued with something I couldn't soften. I had to
use a hack saw at the point of entry to remove the radome, which also
shortened it about an inch. No loss for me since the X50 was already
destroyed, but I woudln't do it with a potentially good antenna.

>Can this antenna be modified for broader band scanner use?

No. The design is not inherently broadband and everything you change
affects everything else.

>Most of my
>interests in the scanning will be the marine bands (156 ish megs) and VHF
>and UHF ham bands anyway.

The X200 will work on 2m and 440MHz. Marine band (156-163MHz) is a
bit of a stretch from 144-148MHz) but may work. VSWR will be high,
but since you're not transmitting, that shouldn't be a huge problem.
Try it and see what happens.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

342. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-05 17:39:58 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <5ff36$518696ec$5353a19c$25688@cache60.multikabel.net>
Source record: 215

```
El 05-05-13 18:12, Tom escribiï¿½:
> Hi
> I got the base out. An old ham buddy stopped by and we cranked and
> hammered that end out. The bottom section of the X200a antenna that is
> connected to the whip. The bottom half of the antenna out of that
> bottom piece of fiberglass tube. Very green as there was water sitting
> in there. Ok so at the base is a coil that is tapped at about 75%
> through it and that tapping (there are two) one to the shield part of
> the S0239 and one to the center of the S0239 connector. Both are
> broken and both look like there is a capacitor there that split apart.
>
> Any idea what those two caps are? I think if I just clean the element
> up with sand paper, deoxit it and replace those caps (if that is what
> is there) looks like two small caps were supposed to be there or what
> is there could be corroded up broken caps.
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> Or is that little piece available online anywhere?
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> Or could I simply connect everything to the gnd planes or even
> lengthen those gnd planes and connect short everything as I only want
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> Thanks for your thoughts
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> 73s
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>> useful info on biconical antennas if you plan to construct your own
>> antenna. As your VHF and UHF bands of interest have around 3:1
>> ratio, VSWR will be good enough for reception.
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>> Wim
>> PA3DJS
>> don't forget to remove abc in case of PM
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>>> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
>>> news:co2dnYBUAIsr7BjMnZ2dnUVZ_uCdnZ2d@earthlink.com...
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>>>> "Tom" <abraa@cadabraa.ca> wrote in message
>>>> news:E77ht.13574$YJ.12011@newsfe11.iad...
>>>>> Hi
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>>>>> I have the Realistic Programmable scanner with 200 programable
>>>>> channels. A lot of range there like 6 m, 2 m, 70 cm, marine, etc
>>>>> etc etc, wide range.
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>>>>> I want to put up an external antenna that I can hook it up to its
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>>>>> Which is better to run a bare copper wire longest and highest to
>>>>> connect it to the BNC center? Or should I use coax and splice the
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>>>> You will not receive much with a long bare copper wire.
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>>>> Get some coax, rg8x is good, the rg 6 type is also good and usually
>>>> cheap. Don't worry about the 70 ohm impedance of the rg-6 as the
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>>>> frequecny range. The lmr400 type is beter, but I doubt that you will
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>>>> broad band reception any ground plane or colinear will probably give
>>>> you good reception over a wide band. After all, the short antenna
>>>> that usually comes with the scanners often pick up many signals.
>>>>
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>> --
>> Wim
>> PA3DJS
>> www.tetech.nl
>> Please remove abc first in case of PM
>

Hello Tom,

This maybe helpful to you:
http://on3jt.byze.be/repair-a-diamond-x200-vhfuhf-antenna.

You are right, the brown disc type components are capacitors.

--
Wim
PA3DJS
www.tetech.nl
Please remove abc first in case of PM

343. (OT) Seeking information.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-06 02:05:58 UTC
From: ogrowup@webtv.net
Message-ID: <6356-51871006-356@storefull-3172.bay.webtv.net>
Source record: 216

Found while cleaning a Grange hall: An Argonne AR3 Dynamic Microphone in original box (no paperwork). Dual impedence (50 Ohms; 250 kOhms). Only 2-wire cable terminating in a 1/4" mono plug. Desk microphone with HEAVY base.

Anyone know anything about this unit? Any value? Useable with modern ham gear?

Any info appreciated.

--
"America is more than just a country. It's an idea."--

Bono--

344. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-06 20:23:44 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <mjUht.21815$VE.537@newsfe25.iad>
Source record: 217

Hi Jeff

That base you show is exactly the same as the base matching coupler on the diamond x200a , mine was completely green and corroded and cleaned up ok. Those capacitors are crumbled and no way of reading them, do you know their value? I can order some and replace them.

thanks

73s

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message news:gt4do8llnagdfab324c9iehkmscrpu283u@4ax.com...
> On Sun, 5 May 2013 07:57:59 -0400, "Tom" <abraa@cadabraa.ca> wrote:
>
>>From the center of the SO239 connector on the antenna there is no
>>continuity
>>between anything. Only continuity between the threads of the SO239 and the
>>antenna length.
>
> Here is my lousy photos of the inside of a Diamond X50 antenna after
> the former owner backed over it with his pickup truck:
> <http://802.11junk.com/jeffl/antennas/Misc/slides/x50-01.html>
> <http://802.11junk.com/jeffl/antennas/Misc/slides/x50.html>
> My guess(tm) is that the X200 base structure is similar. As I recall,
> there should be continuity between the center conductor and the lower
> element. However, the crumpled brass phasing section(?) in the middle
> of the antenna has no continuity through the center conductor. The
> end wires go in about 2" and stop. This may be the lack of continuity
> that you're seeing.
>
>>That bottom fiberglass piece looks glued in there pretty good I don't want
>>to break the seal , I think the water might be getting in from that half
>>way
>>connector.
>
> Don't try to remove it. The fiberglass radome extends into the cast
> aluminum base and is glued with something I couldn't soften. I had to
> use a hack saw at the point of entry to remove the radome, which also
> shortened it about an inch. No loss for me since the X50 was already
> destroyed, but I woudln't do it with a potentially good antenna.
>
>>Can this antenna be modified for broader band scanner use?
>
> No. The design is not inherently broadband and everything you change

> affects everything else.
>
>>Most of my
>>interests in the scanning will be the marine bands (156 ish megs) and VHF
>>and UHF ham bands anyway.
>
> The X200 will work on 2m and 440MHz. Marine band (156-163MHz) is a
> bit of a stretch from 144-148MHz) but may work. VSWR will be high,
> but since you're not transmitting, that shouldn't be a huge problem.
> Try it and see what happens.
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558
>

345. Re: (OT) Seeking information.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-06 20:50:49 UTC
From: amdx <amdx@knology.net>
Message-ID: <2a671$5188157b$18d66b6a$14199@KNOLOGY.NET>
Source record: 218

On 5/5/2013 9:05 PM, Padraigh ProAmerica wrote:
> Found while cleaning a Grange hall: An Argonne AR3 Dynamic Microphone in
> original box (no paperwork). Dual impedence (50 Ohms; 250 kOhms).
> Only 2-wire cable terminating in a 1/4" mono plug. Desk microphone with
> HEAVY base.
>
> Anyone know anything about this unit? Any value? Useable with modern ham
> gear?
>
> Any info appreciated.
>
> --
> "America is more than just a country. It's an idea."--
>
> Bono--
>
Ebay has them listed from $9 to $145.

346. Re: (OT) Seeking information.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-06 20:54:33 UTC
From: amdx <amdx@knology.net>
Message-ID: <1e48b$5188165b$18d66b6a$14520@KNOLOGY.NET>
Source record: 219

On 5/5/2013 9:05 PM, Padraigh ProAmerica wrote:
> Found while cleaning a Grange hall: An Argonne AR3 Dynamic Microphone in
> original box (no paperwork). Dual impedence (50 Ohms; 250 kOhms).
> Only 2-wire cable terminating in a 1/4" mono plug. Desk microphone with
> HEAVY base.
>
> Anyone know anything about this unit? Any value? Useable with modern ham
> gear?
>
> Any info appreciated.
>
> --
> "America is more than just a country. It's an idea."--
>
> Bono--
>

Said to have a heavy bottom... :-)
for blues.

> http://www.youtube.com/watch?v=rNUmc0rdyIE

347. Re: (OT) Seeking information.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-06 21:58:55 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-783259.17585506052013@5ad64b5e.bb.sky.com>
Source record: 220

In article <6356-51871006-356@storefull-3172.bay.webtv.net>,
ogrowup@webtv.net (Padraigh ProAmerica) wrote:

> An Argonne AR3 Dynamic Microphone in
> original box (no paperwork). Dual impedence (50 Ohms; 250 kOhms).
> Only 2-wire cable terminating in a 1/4" mono plug. Desk microphone with
> HEAVY base.
>
> Anyone know anything about this unit? Any value? Useable with modern ham
> gear?

Padraigh-

Your AR3 may work set to 50 Ohms if it has enough output voltage for a particular Ham rig. Modern Ham gear I'm familiar with, uses either a 500 to 600 Ohm, low impedance microphone, or an electret microphone.

It may have more value set to 250 kOhms, for use with an older rig such as the Kenwood TS-520 or Heath SB-100.

You would need to include a push-to-talk switch, either near the microphone or as a foot switch. I suggest you keep the push-to-talk circuit separate from the microphone wiring, rather than sharing the audio shield as a common wire.

Fred
K4DII

348. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-07 18:32:57 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <gnhio8lt3rvhr003orjvopi443ddfklscs@4ax.com>
Source record: 221

On Mon, 6 May 2013 16:23:44 -0400, "Tom" <abraa@cadabraa.ca> wrote:

>That base you show is exactly the same as the base matching coupler on the
>diamond x200a , mine was completely green and corroded and cleaned up ok.
>Those capacitors are crumbled and no way of reading them, do you know their
>value? I can order some and replace them.

My Diamond X50 shows 1pf and 7.5pf.

However, I think it best that you use the values from an X200 antenna,
and not an X50.
<http://on3jt.byze.be/repair-a-diamond-x200-vhfuhf-antenna>
Looks like 9pf and 1pf.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

349. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-07 18:51:48 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <82jio899bsak5g14cjg96h3nch4um5t73u@4ax.com>
Source record: 222

On Tue, 07 May 2013 11:32:57 -0700, Jeff Liebermann <jeffl@cruzio.com>
wrote:

Incidentally, you might find the modifications and analysis of the
Diamond X510 antenna of interest:
<http://pa0fri.home.xs4all.nl/Ant/X510N/Diamond%20X510N%20modification.htm>
--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

350. Re: (OT) Seeking information.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-08 04:15:03 UTC
From: Sal <salmonella@food>
Message-ID: <kmcj8q$d83$1@dont-email.me>
Source record: 223

"Fred McKenzie" <fmmck@aol.com> wrote in message
news:fmmck-783259.17585506052013@5ad64b5e.bb.sky.com...
> In article <6356-51871006-356@storefull-3172.bay.webtv.net>,
> It may have more value set to 250 kOhms, for use with an older rig such
> as the Kenwood TS-520 or Heath SB-100.
>
> You would need to include a push-to-talk switch, either near the
> microphone or as a foot switch. I suggest you keep the push-to-talk
> circuit separate from the microphone wiring, rather than sharing the
> audio shield as a common wire.
>
> Fred
> K4DII

Ditto what Fred said. You should try both impedances on the air and ask a friend or neighbor to spend a few minutes listening to your signal. (Alternatively, record the audio monitor output, if you have one, and make the judgement yourself.)

I can't help with changing the impedance. I know that some dual-impedance mikes make the impedance change on a connector at the base of the mike. However pictures of your mike depict the cord passing directly through the body of the mike. Check and see if the cord is multi-conductor; maybe you use the shield-plus-one at the plug..

351. Re: 75 meter loop - a success story dealing with local QRN

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-10 01:19:31 UTC
From: Jason <jason_warren@ieee.org>
Message-ID: <MPG.2bf6152ee58d327c98976c@news.eternal-september.org>
Source record: 224

On Sat, 27 Apr 2013 12:44:40 -0500 "Fred" <nowhere@nowhere.com> wrote in
article <L7Uet.119054$lR.24147@en-nntp-16.dc1.easynews.com>
>
> I put up a horizontal loop on my lot in town. I needed to reduce the
> noise coming from my neighbours and local industry. I had been using a
> 75 meter dipole. I was enduring an S7 noise level with my dipole. I used
> 450 ohm window line from one corner of my loop as the feed point to the
> corner of my home where it transitioned to LM400 coax from a 4:1 balun.
> I then had 25 feet of this coax coming in through metal siding to my
> amplifier. This scheme reduced my noise level to S3-4. This felt like a
> very nice accomplishment. My friends on 75 meters locally here all
> reported a higher signal level from my transmitter. This was unexpected.
> I was just trying to deal with the high noise level in my receiver.
>
> I used the loop this way for about two years. Next an antenna guru who
> lived about 80 miles away finally talked me into changing to an open
> wire feed line with of course air dialectric instead of plastic. This
> further reduced my noise level. I have no idea why. He did not either,
> he just knew it worked for him. At this point I am at a normal noise
> level of S2.
>
> I was pretty happy with this. Then a retired engineer in Iowa who owned
> the same rig as myself, an Icom 751A said that I could improve noise
> rejection and increase receiver gain by paralleling all the dual gate
> mosfets in my IF strip with the latest type of high gain Mosfet from
> Philips in Germany. The number was BF988. I was reluctant to do this
> because I am 70 years old and do not have the best vision or steadiness
> of hand. I finally dove in and did it. As he predicted, my receiver gain
> jumped up and 75 meter stations within about 300 miles from me were
> pegging my S meter. I was immediately afraid of losing this meter and
> was sure it would never be able to be replaced. I turned down the
> internal RF gain pot so that those stations no longer banged my meter
> against the peg.
>
> Now my S meter noise level during the day without lightning is 0. Some
> days it bounces up to 1.
>
> I am so glad I bit the bullet and put in those new transistors. This low
> noise level makes ham radio so much more enjoyable. I am able to copy
> mobiles on 75 that I just could not hear before.
>
> The other benefit from the loop antenna with the air dialectric feed
> line is that by dumb luck it made 20, 15, and 10 meters a very good
> match with no tuner. I have a solid state amplifier and now jumping

> around these bands chasing DX is really fun.
>
> Just one hams journey trying to reduce received noise. A nice part of
> this story is that there is very little monetary investment in a wire
> loop antenna.
>
> Michael

Thanks for that! I had a horizontal 80m loop at my old qth. It worked well but when I moved I didn't recreate it at the new place. I will try now - my new qth is so noisy on the lower bands that operating is just no fun any more. Worth a try!

73
WA2LJW

352. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-10 12:46:17 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <t_5jt.44$sY5.7@newsfe10.iad>
Source record: 225

Nice, Thanks Jeff and all for your expertise again and again.

Best regards

73s

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:82jio899bsak5g14cjg96h3nch4um5t73u@4ax.com...
> On Tue, 07 May 2013 11:32:57 -0700, Jeff Liebermann <jeffl@cruzio.com>
> wrote:
>
> Incidentally, you might find the modifications and analysis of the
> Diamond X510 antenna of interest:
> <http://pa0fri.home.xs4all.nl/Ant/X510N/Diamond%20X510N%20modification.htm>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558
>

353. Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-10 13:26:14 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <Xz6jt.270$OU5.54@newsfe27.iad>
Source record: 226

Hi again

Sorry, I know I asked this question a couple years ago or a similiar one.

I am stumbled again and I don't want to ruin my batteries so I thought I would ask the pros again.

I have two Marine deep cycle 750 A Nautaulis Canadian Tire Batteries. 225min/115 ah model number is 10-3199-0. These are the bit bigger batteries about 40 lbs.

I also have the 10am/2am Automatic Canadian Tire 11-1567-0 battery charger.

I have had these batteries in my garage all winter and about once every month or 50 days I would bring them up to full charge. Takes about 25 or 30 hours at 10 amp charging until that GREEN light comes on and automatically shutting off.

My problem is now that the green light isn't coming on. They are just sitting there bubbling away, I actually had to put about a litre or two into each of Reverse Osmosis water in to them because I could see they were low. But the green light will not come on and they keep charging. About 3 days now.

I took both batteries down to Canadian Tire and the chap used a little hand tool electronic device that pumped me out a receipt thing (EXP800) and this battery test told me that the batteries are GOOD. Voltage is 12.63 for one and the other was 12.68 for the other. They measured 922 CCA and 684 CCA (both rated for 750A) so he said they are good. Temp was 19C

I asked him why the green light doesn't come on and the charging stop but he said because the batteries are fully charged and good that the charger must be good. And it is good because I used it on another deep cycle battery I have and the green light came on and it stopped when fullly charged.

I see the needle is close to the green on the meter but just not moving over and continues charging at 10 amps with the bigger batteries in question.

Batteries are almost 4 years old.

Any ideas or comments? Should I stop the charging? or continue until that green light comes on like it used to? I would like to get a few more years from these batteries . All coments are appreciated, cheap or otherwise, I appreciate your expertise very much. Sorry the question is OFF Topic, but I know you folks have the answer better than the boating groups. thnx

Best regards and thanks

73s

354. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-10 17:05:20 UTC
From: seediq <nowhere@driveby.com>
Message-ID: <9N9jt.135321$Zp1.125227@en-nntp-15.dc1.easynews.com>
Source record: 227

On 5/10/2013 8:26 AM, Tom wrote:
> Hi again
>
> Sorry, I know I asked this question a couple years ago or a similiar one.
>
> I am stumbled again and I don't want to ruin my batteries so I thought I
> would ask the pros again.
>
> I have two Marine deep cycle 750 A Nautaulis Canadian Tire Batteries.
> 225min/115 ah model number is 10-3199-0. These are the bit bigger
> batteries about 40 lbs.
>
> I also have the 10am/2am Automatic Canadian Tire 11-1567-0 battery charger.
>
> I have had these batteries in my garage all winter and about once every
> month or 50 days I would bring them up to full charge. Takes about 25 or
> 30 hours at 10 amp charging until that GREEN light comes on and
> automatically shutting off.
>
> My problem is now that the green light isn't coming on. They are just
> sitting there bubbling away, I actually had to put about a litre or two
> into each of Reverse Osmosis water in to them because I could see they
> were low. But the green light will not come on and they keep charging.
> About 3 days now.
>
> I took both batteries down to Canadian Tire and the chap used a little
> hand tool electronic device that pumped me out a receipt thing (EXP800)
> and this battery test told me that the batteries are GOOD. Voltage is
> 12.63 for one and the other was 12.68 for the other. They measured 922
> CCA and 684 CCA (both rated for 750A) so he said they are good. Temp was
> 19C
>
>
> I asked him why the green light doesn't come on and the charging stop
> but he said because the batteries are fully charged and good that the
> charger must be good. And it is good because I used it on another deep
> cycle battery I have and the green light came on and it stopped when
> fullly charged.
>
> I see the needle is close to the green on the meter but just not moving
> over and continues charging at 10 amps with the bigger batteries in
> question.
>
> Batteries are almost 4 years old.

>
> Any ideas or comments? Should I stop the charging? or continue until
> that green light comes on like it used to? I would like to get a few
> more years from these batteries . All coments are appreciated, cheap or
> otherwise, I appreciate your expertise very much. Sorry the question is
> OFF Topic, but I know you folks have the answer better than the boating
> groups. thnx
>
> Best regards and thanks
>
> 73s
>
>

I can't really tell if your batteries are any good. His tester may not be that good. I do know how to keep batteries alive for years in my home. I have an elaborate security system run from a bank of 12 volt batteries. These batteries each has their own automatic charter. Automatic means that when the batteries reach full charge the charger shuts off until the battery needs to be charged again.

Most of the newer style digital looking chargers simply don't work. The older style that make a clunk sound when they start charging are the good ones. They shut completely off to prevent over charging and let the battery run down until it needs charging again. This has worked for me for many years.

Michael

355. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-10 17:36:23 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <seajt.663$fd.562@newsfe18.iad>
Source record: 228

Yes, sounds like you have your system figured out and it works. On the exact same receipt paper thing that the Canadian Tire guy's machine tested had the comment on each test result paper " Avg life in area : 46 MO. So that isn't very long and my last batteries (same style) lasted 8 years. After asking the group this question years ago I have put my batteries on a better program and care for them better.

My charger makes that "chunk" noise you mentioned when I plug it in.

The Chap at Canadian Tire just couldn't tell me anymore, he didn't have the knowledge, very nice guy, very smart (and handsome) but didn't have the knowledge of deep cycle marine batteries and their proper maintenance. Which is probably good idea, however I know this group has the knowledge, lots of nice guys, (very handsome also) so I like to hear your opinions. The cheap ones are good also.

Thanks and enjoy the day

73s

"seediq" <nowhere@driveby.com> wrote in message
news:9N9jt.135321$Zp1.125227@en-nntp-15.dc1.easynews.com...
> On 5/10/2013 8:26 AM, Tom wrote:
>> Hi again
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>> Sorry, I know I asked this question a couple years ago or a similiar one.
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>> I am stumbled again and I don't want to ruin my batteries so I thought I
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>> My problem is now that the green light isn't coming on. They are just
>> sitting there bubbling away, I actually had to put about a litre or two
>> into each of Reverse Osmosis water in to them because I could see they
>> were low. But the green light will not come on and they keep charging.

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>> I took both batteries down to Canadian Tire and the chap used a little
>> hand tool electronic device that pumped me out a receipt thing (EXP800)
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>> 12.63 for one and the other was 12.68 for the other. They measured 922
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>>
>> Any ideas or comments? Should I stop the charging? or continue until
>> that green light comes on like it used to? I would like to get a few
>> more years from these batteries . All coments are appreciated, cheap or
>> otherwise, I appreciate your expertise very much. Sorry the question is
>> OFF Topic, but I know you folks have the answer better than the boating
>> groups. thnx
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>> Best regards and thanks
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>> 73s
>>
>>
>
> I can't really tell if your batteries are any good. His tester may not be
> that good. I do know how to keep batteries alive for years in my home. I
> have an elaborate security system run from a bank of 12 volt batteries.
> These batteries each has their own automatic charter. Automatic means that
> when the batteries reach full charge the charger shuts off until the
> battery needs to be charged again.
>
> Most of the newer style digital looking chargers simply don't work. The
> older style that make a clunk sound when they start charging are the good
> ones. They shut completely off to prevent over charging and let the
> battery run down until it needs charging again. This has worked for me for
> many years.
>
> Michael
>

356. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-10 18:26:33 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <ab5f5$518d394d$5353a19c$14818@cache100.multikabel.net>
Source record: 229

El 10-05-13 15:26, Tom escribiï¿½:
> Hi again
>
> Sorry, I know I asked this question a couple years ago or a similiar one.
>
> I am stumbled again and I don't want to ruin my batteries so I thought
> I would ask the pros again.
>
> I have two Marine deep cycle 750 A Nautaulis Canadian Tire Batteries.
> 225min/115 ah model number is 10-3199-0. These are the bit bigger
> batteries about 40 lbs.
>
> I also have the 10am/2am Automatic Canadian Tire 11-1567-0 battery
> charger.
>
> I have had these batteries in my garage all winter and about once
> every month or 50 days I would bring them up to full charge. Takes
> about 25 or 30 hours at 10 amp charging until that GREEN light comes
> on and automatically shutting off.
>
> My problem is now that the green light isn't coming on. They are just
> sitting there bubbling away, I actually had to put about a litre or
> two into each of Reverse Osmosis water in to them because I could see
> they were low. But the green light will not come on and they keep
> charging. About 3 days now.
>
> I took both batteries down to Canadian Tire and the chap used a little
> hand tool electronic device that pumped me out a receipt thing
> (EXP800) and this battery test told me that the batteries are GOOD.
> Voltage is 12.63 for one and the other was 12.68 for the other. They
> measured 922 CCA and 684 CCA (both rated for 750A) so he said they are
> good. Temp was 19C
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>
> I asked him why the green light doesn't come on and the charging stop
> but he said because the batteries are fully charged and good that the
> charger must be good. And it is good because I used it on another deep
> cycle battery I have and the green light came on and it stopped when
> fullly charged.
>
> I see the needle is close to the green on the meter but just not
> moving over and continues charging at 10 amps with the bigger
> batteries in question.
>

> Batteries are almost 4 years old.
>
> Any ideas or comments? Should I stop the charging? or continue until
> that green light comes on like it used to? I would like to get a few
> more years from these batteries . All coments are appreciated, cheap
> or otherwise, I appreciate your expertise very much. Sorry the
> question is OFF Topic, but I know you folks have the answer better
> than the boating groups. thnx
>
> Best regards and thanks
>
> 73s
>
>
Hello Tom,

Can you measure the voltage when the charger is charging the batteries (after charging your full batteries for an hour or more)? When it reads > 14.8V, your charger is only generating gas and you are reducing the service life of the battery (and you need to add demi water).

You may also measure the battery open load voltage after leaving it some days without any load (no charger connected). When it reads the values you mentioned (12.68V), there is no leakage in one of the cells and the battery is fully charged.

I have no idea about the charge modes of your charger, maybe some voltage or current setting changed over time. For example when the charging voltage drifts up during aging, the charge current remains relatively high so that the charger thinks it still needs charge. Some chargers have a current measurement. Once the current drops below a certain value, the charger changes to maintenance charge (that means it reduces the charge voltage to avoid/reduce gassing).

--
Wim
PA3DJS
www.tetech.nl
Please remove abc first in case of PM

357. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-10 18:30:14 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <Y0bjt.107$XI6.68@newsfe28.iad>
Source record: 230

Hi Wim
THanks for the response

Yes, great, I will make the measurement on the battery after one hour of charging (while charging it) at 10amps to see if it measures greater than 14.8 volts. That may answer my concern.

If it remains under the 14.8v mark should I just keep it charging? My charger is the automatic style that shuts off when it knows the battery is fully charged. It has the meter on the front and always starts off near the red then goes through the yellow part of the meter then when in the green part of the meter it shuts off and the green light comes on. If left like this the charger will cycle back on after a while for very short time then off then on, etc etc, does that mean it is losing its charge just sitting there? Is that ok or the sign of a dead or dying battery? Recently it just doesn't shut off and stays charging. I will measure its voltage at this stage.

I will also measure to see if it is holding the voltage after a few days of nothing. I have a digital volt meter and can measure that easily.

Thanks

Tom

"Wimpie" <wimabctel@tetech.nl> wrote in message
news:ab5f5$518d394d$5353a19c$14818@cache100.multikabel.net...
> El 10-05-13 15:26, Tom escribiï¿½:
>> Hi again
>>
>> Sorry, I know I asked this question a couple years ago or a similiar one.
>>
>> I am stumbled again and I don't want to ruin my batteries so I thought
>> I would ask the pros again.
>>
>> I have two Marine deep cycle 750 A Nautaulis Canadian Tire Batteries.
>> 225min/115 ah model number is 10-3199-0. These are the bit bigger
>> batteries about 40 lbs.
>>
>> I also have the 10am/2am Automatic Canadian Tire 11-1567-0 battery
>> charger.
>>
>> I have had these batteries in my garage all winter and about once
>> every month or 50 days I would bring them up to full charge. Takes
>> about 25 or 30 hours at 10 amp charging until that GREEN light comes
>> on and automatically shutting off.

>>
>> My problem is now that the green light isn't coming on. They are just
>> sitting there bubbling away, I actually had to put about a litre or
>> two into each of Reverse Osmosis water in to them because I could see
>> they were low. But the green light will not come on and they keep
>> charging. About 3 days now.
>>
>> I took both batteries down to Canadian Tire and the chap used a little
>> hand tool electronic device that pumped me out a receipt thing
>> (EXP800) and this battery test told me that the batteries are GOOD.
>> Voltage is 12.63 for one and the other was 12.68 for the other. They
>> measured 922 CCA and 684 CCA (both rated for 750A) so he said they are
>> good. Temp was 19C
>>
>>
>> I asked him why the green light doesn't come on and the charging stop
>> but he said because the batteries are fully charged and good that the
>> charger must be good. And it is good because I used it on another deep
>> cycle battery I have and the green light came on and it stopped when
>> fullly charged.
>>
>> I see the needle is close to the green on the meter but just not
>> moving over and continues charging at 10 amps with the bigger
>> batteries in question.
>>
>> Batteries are almost 4 years old.
>>
>> Any ideas or comments? Should I stop the charging? or continue until
>> that green light comes on like it used to? I would like to get a few
>> more years from these batteries . All coments are appreciated, cheap
>> or otherwise, I appreciate your expertise very much. Sorry the
>> question is OFF Topic, but I know you folks have the answer better
>> than the boating groups. thnx
>>
>> Best regards and thanks
>>
>> 73s
>>
>>
> Hello Tom,
>
> Can you measure the voltage when the charger is charging the batteries
> (after charging your full batteries for an hour or more)? When it reads >
> 14.8V, your charger is only generating gas and you are reducing the
> service life of the battery (and you need to add demi water).
>
> You may also measure the battery open load voltage after leaving it some
> days without any load (no charger connected). When it reads the values you
> mentioned (12.68V), there is no leakage in one of the cells and the
> battery is fully charged.

>
> I have no idea about the charge modes of your charger, maybe some voltage
> or current setting changed over time. For example when the charging
> voltage drifts up during aging, the charge current remains relatively high
> so that the charger thinks it still needs charge. Some chargers have a
> current measurement. Once the current drops below a certain value, the
> charger changes to maintenance charge (that means it reduces the charge
> voltage to avoid/reduce gassing).
>
>
> --
> Wim
> PA3DJS
> www.tetech.nl
> Please remove abc first in case of PM

358. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-11 03:36:44 UTC
From: rickman <gnuarm@gmail.com>
Message-ID: <kmke5rrgp1@dont-email.me>
Source record: 231

On 5/10/2013 1:36 PM, Tom wrote:
> Yes, sounds like you have your system figured out and it works. On the
> exact same receipt paper thing that the Canadian Tire guy's machine
> tested had the comment on each test result paper " Avg life in area : 46
> MO. So that isn't very long and my last batteries (same style) lasted 8
> years. After asking the group this question years ago I have put my
> batteries on a better program and care for them better.
>
> My charger makes that "chunk" noise you mentioned when I plug it in.
>
> The Chap at Canadian Tire just couldn't tell me anymore, he didn't have
> the knowledge, very nice guy, very smart (and handsome) but didn't have
> the knowledge of deep cycle marine batteries and their proper
> maintenance. Which is probably good idea, however I know this group has
> the knowledge, lots of nice guys, (very handsome also) so I like to hear
> your opinions. The cheap ones are good also.
>
> Thanks and enjoy the day

I'm no expert with batteries and different types may vary a bit, I can't say for sure. I worked for a railroad here in the US with the signal gang and they used batteries on all the signals so they worked in power failures. Just like much of the equipment on the railroad, they had batteries in service for many, many years. I believe I was told they would be expected to last some 20 years. They looked like car batteries, not anything special like the huge ones they use at the phone company. The point is that they used a trickle charge.

So I don't know that you must have a super special top charge detecting charger to properly maintain batteries. But then there may be differences in batteries. These were some 40 years ago and I believe this was before they started adding small amounts of cadmium or similar things to reduce the need for adding water, etc. Maybe trickle charging is no longer recommended. But back then that was what the battery makers wanted you to do to prevent damage, trickle charge.

Have you thought of contacting the company directly rather than through the stores? I bet their web site has some good info on this.

Rick

359. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-11 04:09:45 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <0sgro8t2bq77l2ne59r4evc7f2rsvuvtj8@4ax.com>
Source record: 232

On Fri, 10 May 2013 09:26:14 -0400, "Tom" <abraa@cadabraa.ca> wrote:

>My problem is now that the green light isn't coming on.

I might offer a clue. I have a Statpower/Xantrex 10A float charger running my battery pile. It worked perfectly for about 5 years. Then, I accidentally reversed the polarity on a battery. It still charges, but the end of charge light no longer comes on with any battery that I try. I'll tear it apart and see what I blew up when I have time and the bench is clean.

You might want to take a known good battery of similar capacity and try charging it to see if the light comes on. If not, it's charger repair time.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

360. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-11 10:47:32 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <5f0$518e1f37$5353a19c$7602@cache90.multikabel.net>
Source record: 233

El 10-05-13 20:30, Tom escribiï¿½:

Hello Tom,

> Hi Wim
> THanks for the response
>
> Yes, great, I will make the measurement on the battery after one hour
> of charging (while charging it) at 10amps to see if it measures
> greater than 14.8 volts. That may answer my concern.
>
> If it remains under the 14.8v mark should I just keep it charging?

Unless you always need a fully charged battery always, I would not leave it on the charger, as even at 14.8V there will be some gassing. The 14.8V is an average value. The exact value for long time charge maintenance is temperature dependent (high temperature needs lower voltage, and may vary a bit per battery type). Some batteries I had stated 14.4V at room temperature.

You may contact the manufacturer regarding the optimum maintenance charge voltage.

Using a low maximum charge voltage (for example 14.2V) results in longer time to reach 100%, or you don't reach 100% state of charge at all.

My
> charger is the automatic style that shuts off when it knows the
> battery is fully charged. It has the meter on the front and always
> starts off near the red then goes through the yellow part of the meter
> then when in the green part of the meter it shuts off and the green
> light comes on. If left like this the charger will cycle back on after
> a while for very short time then off then on, etc etc, does that mean
> it is losing its charge just sitting there? Is that ok or the sign of
> a dead or dying battery? Recently it just doesn't shut off and stays
> charging. I will measure its voltage at this stage.
>
> I will also measure to see if it is holding the voltage after a few
> days of nothing. I have a digital volt meter and can measure that easily.
>
> Thanks
>
> Tom

http://www.energymatters.com.au/renewable-energy/batteries/battery-voltage-discharge.php
shows state of charge versus open circuit voltage for various lead
batteries.

You may know that if you don't use them, store your batteries at low
temperature (reduces self-discharge, high humidity is fine) and check
the open circuit voltage every few months. That gives you an idea of
how fast they self-dicharge. For Batteries I don't use frequently I
recharge them when state of charge will drop below 50..60% (when they
drop below 12.3V I recharge them).

--
Wim
PA3DJS
www.tetech.nl
Please remove abc first in case of PM

>
>
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>
>
>
> "Wimpie" <wimabctel@tetech.nl> wrote in message
> news:ab5f5$518d394d$5353a19c$14818@cache100.multikabel.net...
>> El 10-05-13 15:26, Tom escribii¿½:
>>> Hi again
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>>> Sorry, I know I asked this question a couple years ago or a
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>>> I am stumbled again and I don't want to ruin my batteries so I thought
>>> I would ask the pros again.
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>>> I have two Marine deep cycle 750 A Nautaulis Canadian Tire Batteries.
>>> 225min/115 ah model number is 10-3199-0. These are the bit bigger
>>> batteries about 40 lbs.
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>>> I also have the 10am/2am Automatic Canadian Tire 11-1567-0 battery
>>> charger.
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>>> I have had these batteries in my garage all winter and about once
>>> every month or 50 days I would bring them up to full charge. Takes
>>> about 25 or 30 hours at 10 amp charging until that GREEN light comes
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>>> My problem is now that the green light isn't coming on. They are just
>>> sitting there bubbling away, I actually had to put about a litre or
>>> two into each of Reverse Osmosis water in to them because I could see
>>> they were low. But the green light will not come on and they keep
>>> charging. About 3 days now.
>>>

>>> I took both batteries down to Canadian Tire and the chap used a little
>>> hand tool electronic device that pumped me out a receipt thing
>>> (EXP800) and this battery test told me that the batteries are GOOD.
>>> Voltage is 12.63 for one and the other was 12.68 for the other. They
>>> measured 922 CCA and 684 CCA (both rated for 750A) so he said they are
>>> good. Temp was 19C
>>>
>>>
>>> I asked him why the green light doesn't come on and the charging stop
>>> but he said because the batteries are fully charged and good that the
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>>> cycle battery I have and the green light came on and it stopped when
>>> fullly charged.
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>>> moving over and continues charging at 10 amps with the bigger
>>> batteries in question.
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>>> Batteries are almost 4 years old.
>>>
>>> Any ideas or comments? Should I stop the charging? or continue until
>>> that green light comes on like it used to? I would like to get a few
>>> more years from these batteries . All coments are appreciated, cheap
>>> or otherwise, I appreciate your expertise very much. Sorry the
>>> question is OFF Topic, but I know you folks have the answer better
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>>> Best regards and thanks
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>>>
>> Hello Tom,
>>
>> Can you measure the voltage when the charger is charging the
>> batteries (after charging your full batteries for an hour or more)?
>> When it reads > 14.8V, your charger is only generating gas and you
>> are reducing the service life of the battery (and you need to add
>> demi water).
>>
>> You may also measure the battery open load voltage after leaving it
>> some days without any load (no charger connected). When it reads the
>> values you mentioned (12.68V), there is no leakage in one of the
>> cells and the battery is fully charged.
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>> I have no idea about the charge modes of your charger, maybe some
>> voltage or current setting changed over time. For example when the
>> charging voltage drifts up during aging, the charge current remains
>> relatively high so that the charger thinks it still needs charge.
>> Some chargers have a current measurement. Once the current drops

>> below a certain value, the charger changes to maintenance charge
>> (that means it reduces the charge voltage to avoid/reduce gassing).
>>
>>
>> --
>> Wim
>> PA3DJS
>> www.tetech.nl
>> Please remove abc first in case of PM
>

361. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-11 12:02:02 UTC
From: Wimpie <wimabctel@tetech.nl>
Message-ID: <ee808$518e30ac$5353a19c$12258@cache100.multikabel.net>
Source record: 234

```
El 11-05-13 12:47, Wimpie escribiï¿½:
> El 10-05-13 20:30, Tom escribiï¿½:
>
> Hello Tom,
>
>> Hi Wim
>> THanks for the response
>>
>> Yes, great, I will make the measurement on the battery after one hour
>> of charging (while charging it) at 10amps to see if it measures
>> greater than 14.8 volts. That may answer my concern.
>>
>> If it remains under the 14.8v mark should I just keep it charging?
>
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> leave it on the charger, as even at 14.8V there will be some gassing.
> The 14.8V is an average value. The exact value for long time charge
> maintenance is temperature dependent (high temperature needs lower
> voltage, and may vary a bit per battery type). Some batteries I had
> stated 14.4V at room temperature.
>
> You may contact the manufacturer regarding the optimum maintenance
> charge voltage.
>
> Using a low maximum charge voltage (for example 14.2V) results in
> longer time to reach 100%, or you don't reach 100% state of charge at
> all.
>
>
> My
>> charger is the automatic style that shuts off when it knows the
>> battery is fully charged. It has the meter on the front and always
>> starts off near the red then goes through the yellow part of the meter
>> then when in the green part of the meter it shuts off and the green
>> light comes on. If left like this the charger will cycle back on after
>> a while for very short time then off then on, etc etc, does that mean
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>> easily.
>>
```

>> Thanks
>>
>> Tom
>
> http://www.energymatters.com.au/renewable-energy/batteries/battery-voltage-discharge.php
>
> shows state of charge versus open circuit voltage for various lead
> batteries.
>
> You may know that if you don't use them, store your batteries at low
> temperature (reduces self-discharge, high humidity is fine) and check
> the open circuit voltage every few months. That gives you an idea of
> how fast they self-dicharge. For Batteries I don't use frequently I
> recharge them when state of charge will drop below 50..60% (when they
> drop below 12.3V I recharge them).
>

Hello Tom,

Some charge voltage numbers that I used in the past for standby
charger design (I don't remember the source). This means the battery
is on the charger every day, year after year.
2.26 to 2.31/cell at 20 degr. C, Correct with -2mV/K battery
temperature.

for a 12V battery: 13.56V to 13.86V

I do remember that some batteries didn't reach 100% charge, but for
many standby use applications, service life is more important then
100% state of charge.

For overnight charging (if you want a 100% charged battery for sure in
short time):
2.43 to 2.53/cell at 20 degr. C

for a 12V battery: 14.58V to 15.18V
When you apply such a voltage to the battery, the battery will bubble
(as you noticed) and the battery will lose water and service life.

--
Wim
PA3DJS
www.tetech.nl
Please remove abc first in case of PM

362. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-11 17:07:42 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <tVujt.79$Ax6.57@newsfe25.iad>
Source record: 235

My God! A Ham waiting till his bench is clean! Hah!

Irv VE6BP

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:0sgro8t2bq77l2ne59r4evc7f2rsvuvtj8@4ax.com...
> On Fri, 10 May 2013 09:26:14 -0400, "Tom" <abraa@cadabraa.ca> wrote:
>
>>My problem is now that the green light isn't coming on.
>
> I might offer a clue. I have a Statpower/Xantrex 10A float charger
> running my battery pile. It worked perfectly for about 5 years. Then,
> I accidentally reversed the polarity on a battery. It still charges,
> but the end of charge light no longer comes on with any battery that I
> try. I'll tear it apart and see what I blew up when I have time and
> the bench is clean.
>
> You might want to take a known good battery of similar capacity and
> try charging it to see if the light comes on. If not, it's charger
> repair time.
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558
>

363. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 01:14:24 UTC
From: tom <news4792@taring.org>
Message-ID: <U4SdnZFW4elxcRPMnZ2dnUVZ_sadnZ2d@iphouse.net>
Source record: 236

On 5/10/2013 8:26 AM, Tom wrote:
> Hi again
>
> Sorry, I know I asked this question a couple years ago or a similiar one.
>
> I am stumbled again and I don't want to ruin my batteries so I thought I
> would ask the pros again.
>
> I have two Marine deep cycle 750 A Nautaulis Canadian Tire Batteries.
> 225min/115 ah model number is 10-3199-0. These are the bit bigger
> batteries about 40 lbs.
>
> I also have the 10am/2am Automatic Canadian Tire 11-1567-0 battery charger.
>
> I have had these batteries in my garage all winter and about once every
> month or 50 days I would bring them up to full charge. Takes about 25 or
> 30 hours at 10 amp charging until that GREEN light comes on and
> automatically shutting off.
>
> My problem is now that the green light isn't coming on. They are just
> sitting there bubbling away, I actually had to put about a litre or two
> into each of Reverse Osmosis water in to them because I could see they
> were low. But the green light will not come on and they keep charging.
> About 3 days now.
>
> I took both batteries down to Canadian Tire and the chap used a little
> hand tool electronic device that pumped me out a receipt thing (EXP800)
> and this battery test told me that the batteries are GOOD. Voltage is
> 12.63 for one and the other was 12.68 for the other. They measured 922
> CCA and 684 CCA (both rated for 750A) so he said they are good. Temp was
> 19C
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>
> I asked him why the green light doesn't come on and the charging stop
> but he said because the batteries are fully charged and good that the
> charger must be good. And it is good because I used it on another deep
> cycle battery I have and the green light came on and it stopped when
> fullly charged.
>
> I see the needle is close to the green on the meter but just not moving
> over and continues charging at 10 amps with the bigger batteries in
> question.
>
> Batteries are almost 4 years old.

>
> Any ideas or comments? Should I stop the charging? or continue until
> that green light comes on like it used to? I would like to get a few
> more years from these batteries . All coments are appreciated, cheap or
> otherwise, I appreciate your expertise very much. Sorry the question is
> OFF Topic, but I know you folks have the answer better than the boating
> groups. thnx
>
> Best regards and thanks
>
> 73s
>
>
Hi Tom.

What you want is a 3 stage charger. The guy who said the old "clunk",
relay based, chargers are best is way off base.

A decent 3 stage charger lets you set a number of things, all of which
are tailored to your specific battery string.

I have a set with an 80 AH and an 160 AH AGM 12V battery. I charge
using a 200W solar array through a maximum power point 3 stage charger.
The MPP part isn't relevant for you, but the 3 stage adjustments plus
a battery temperature sensor are. You can set battery finish voltage
per manufacturer specs at a specific temperature and then the sensor
drives the rest based on current temperature. The 3 stages finish the
charge the correct way and don't overcharge the string or cause
excessive water loss.

tom
K0TAR

364. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 01:34:02 UTC
From: tom <news4792@taring.org>
Message-ID: <8o-dnU_Rr_4abBPMnZ2dnUVZ_q-dnZ2d@iphouse.net>
Source record: 237

On 5/11/2013 8:14 PM, tom wrote:
> Hi Tom.
>
> What you want is a 3 stage charger. The guy who said the old "clunk",
> relay based, chargers are best is way off base.
>
> A decent 3 stage charger lets you set a number of things, all of which
> are tailored to your specific battery string.
>
> I have a set with an 80 AH and an 160 AH AGM 12V battery. I charge
> using a 200W solar array through a maximum power point 3 stage charger.
> The MPP part isn't relevant for you, but the 3 stage adjustments plus
> a battery temperature sensor are. You can set battery finish voltage
> per manufacturer specs at a specific temperature and then the sensor
> drives the rest based on current temperature. The 3 stages finish the
> charge the correct way and don't overcharge the string or cause
> excessive water loss.
>
> tom
> K0TAR
>
>

Oops, forgot what I had. Put the string together last year from a 9
year old 66AH and a 4 year old 133AH battery. Each removed from a UPS
system. I've had the 66AH for 6 years on intelligent solar controllers.
Got the 133 last summer for $100 used. Upgraded my solar array to
200w from 33w and upgraded the controller to a 25 amp Solar Boost 2000e.

They sat from November to end of April with no charging. I checked the
voltage last week before I pulled the camper out of the garage for its
first light of the year - 12.80 volts. That is in the excellent range
after 5 months idle.

Best buys on AGM batteries is to look for 3 to 5 year old ones being
rotated out from data centers that demand high reliablity. They are
usually rated for at least a 20 year life. And are 0 maintenance to boot.

tom
K0TAR

365. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 01:42:44 UTC
From: tom <news4792@taring.org>
Message-ID: <2cGdnQuFgfINbhPMnZ2dnUVZ_h6dnZ2d@iphouse.net>
Source record: 238

On 5/11/2013 8:34 PM, tom wrote:
>
> Best buys on AGM batteries is to look for 3 to 5 year old ones being
> rotated out from data centers that demand high reliablity. They are
> usually rated for at least a 20 year life. And are 0 maintenance to boot.
>
> tom
> K0TAR
>

And finding the used ones isn't hard. I found the 133AH on craigs list.

Be sure to buy identical types. My 2 are not the same AH rating but are
from the same line by the same manufacturer.

tom
K0TAR

366. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 06:18:43 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <6vcuo89l1qsgtkq6uqbp6r75c5rbvbl5m5@4ax.com>
Source record: 239

On Sat, 11 May 2013 11:07:42 -0600, "Irv Finkleman" <finkirv@shaw.ca>
wrote:

>My God! A Ham waiting till his bench is clean! Hah!
>Irv VE6BP

Yes, I know. A clean workbench is a sign of a sick mind.
<http://802.11junk.com/jeffl/pics/home/slides/chain-saw-repair.html>
It's currently not quite as messy, but it's close.

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

367. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 20:34:53 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <MoadnQ2wT8JwYRLMnZ2dnUVZ_rWdnZ2d@earthlink.com>
Source record: 240

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:6vcuo89l1qsgtkq6uqbp6r75c5rbvbl5m5@4ax.com...
>
> Yes, I know. A clean workbench is a sign of a sick mind.
> <http://802.11junk.com/jeffl/pics/home/slides/chain-saw-repair.html>
> It's currently not quite as messy, but it's close.
>

Looks like you have an antenna harness for phasing 2 meter antennas. Is the
chain saw apart to put the co-phased antennas on ? hihi..

368. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 21:24:13 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <e410p85tj9orrbs2aesi7k1r1ktvohobj3@4ax.com>
Source record: 241

On Sun, 12 May 2013 16:34:53 -0400, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:6vcuo89l1qsgtkq6uqbp6r75c5rbvbl5m5@4ax.com...
>>
>> Yes, I know. A clean workbench is a sign of a sick mind.
>> <http://802.11junk.com/jeffl/pics/home/slides/chain-saw-repair.html>
>> It's currently not quite as messy, but it's close.

>Looks like you have an antenna harness for phasing 2 meter antennas.

I guess you mean the Wilkinson power divider/splitter in the lower
left. It's not for phasing antennas, but for combining the signals
from two receive only 1090MHz antennas for ADS-B reception. The lines
are 3/4 electrical wavelengths long RG-6a/u because I couldn't find
any small diameter 75 ohm coax. That was a prototype I just threw
together to see if I really needed the 100 ohm resistor for receive
only. With low gain antennas, it's not needed. For high gain, where
impedance matching is more important, it's needed.

>Is the
>chain saw apart to put the co-phased antennas on ? hihi..

The chain saw has nothing to do with RF, unless you include using the
trees as supports for various HF antennas. In this case, the only
thing wrong with the saw was that the fuel line split and started
leaking. In order to replace a simple fuel line, I had to tear down
the saw completely. I used the occasion to also clean out the
accumulated crud, clean the carb, replace various filters, clean the
carbon out of the exhaust port, and do the usual tuneup. Right now,
the bench has two weed whackers torn apart. Since I took them apart
about 2 weeks ago, I don't remember which parts belong to which
engine. This should be interesting...

--
Jeff Liebermann jeffl@cruzio.com
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

369. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 21:44:27 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <cl20p8988a3inqjf1rmt9bbn4bvh3dlnnc@4ax.com>
Source record: 242

On Fri, 10 May 2013 23:36:44 -0400, rickman <gnuarm@gmail.com> wrote:

>Just like much of the equipment on the railroad, they had
>batteries in service for many, many years. I believe I was told they
>would be expected to last some 20 years. They looked like car
>batteries, not anything special like the huge ones they use at the phone
>company. The point is that they used a trickle charge.

Presumably, those were flooded wet cell batteries, not AGM. I don't
think that will work. Flooded cells lose about 1% of their charge per
day due to self discharge. A trickle charger just can't keep up.
However, AGM only loses 1% to 3% per month, which should work well
with a trickle charger.

>But then there may be differences in batteries.

Yep. Flooded versus AGM.

>These were some 40 years ago and I believe
>this was before they started adding small amounts of cadmium or similar
>things to reduce the need for adding water, etc. Maybe trickle charging
>is no longer recommended. But back then that was what the battery
>makers wanted you to do to prevent damage, trickle charge.

One thing nice about trickle charging (and float charging) is that it
seems to reduce suflation.

>Have you thought of contacting the company directly rather than through
>the stores? I bet their web site has some good info on this.

My conspiracy theory of battery charging is that if you ask the
battery vendor how to maintain and charge their batteries, they will
direct you to the best way to kill the battery, so that you will buy
more batteries. I suspect you may do better asking the battery
charger vendors, who have a financial interest in keeping the
batteries alive.

More:
<http://batteryuniversity.com>
<http://www.mpoweruk.com>
<http://www.mpoweruk.com/chargers.htm>

--
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

370. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-12 21:56:21 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <wq-dnfb-J4OYjQ3MnZ2dnUVZ_qOdnZ2d@earthlink.com>
Source record: 243

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:e410p85tj9orrbs2aesi7k1r1ktvohobj3@4ax.com...
> On Sun, 12 May 2013 16:34:53 -0400, "Ralph Mowery"
> <rmowery28146@earthlink.net> wrote:
>
>>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>>news:6vcuo89l1qsgtkq6uqbp6r75c5rbvbl5m5@4ax.com...
>>>
>>> Yes, I know. A clean workbench is a sign of a sick mind.
>>> <http://802.11junk.com/jeffl/pics/home/slides/chain-saw-repair.html>
>>> It's currently not quite as messy, but it's close.
>
>>Looks like you have an antenna harness for phasing 2 meter antennas.
>
> I guess you mean the Wilkinson power divider/splitter in the lower
> left. It's not for phasing antennas, but for combining the signals
> from two receive only 1090MHz antennas for ADS-B reception. The lines
> are 3/4 electrical wavelengths long RG-6a/u because I couldn't find
> any small diameter 75 ohm coax. That was a prototype I just threw
> together to see if I really needed the 100 ohm resistor for receive
> only. With low gain antennas, it's not needed. For high gain, where
> impedance matching is more important, it's needed.
>

I know about the Wilkinsson devider. Not sure if it is done now, but the
CBers would put two antennas on their cars and especially the big trucks.
Feed them with a T and 1/4 wavelengths of coax if I recall corectly.
Thought you were going to do that to the chain saw for 2 meters to help out
your handy talkey while sawing wood. As if you could hear it over the
noise.

I have not looked over the power devider in a long time. I was thinking the
100 ohm resistor was mainly to absorbe the unballanced power. If everything
was matched you could leave it out, but as you well know, nothing is perfect
in the RF world.

What are you using for a receiver for the ADS-B ? I have one of the dongles
that plugs into the usb of a computer on order. Should be here Monday. It
tunes from about 25 MHz to over 1 Ghz from the writeups. Off ebay here is
the item number.
310655269457

I don' t see how they can make and ship a device like that for only $ 11.00.

371. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-13 00:01:46 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <1090p8lndvbkhcq74tj8gpo059m3513ivi@4ax.com>
Source record: 244

On Sun, 12 May 2013 17:56:21 -0400, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>
>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>news:e410p85tj9orrbs2aesi7k1r1ktvohobj3@4ax.com...
>> On Sun, 12 May 2013 16:34:53 -0400, "Ralph Mowery"
>> <rmowery28146@earthlink.net> wrote:
>>
>>>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>>>news:6vcuo89l1qsgtkq6uqbp6r75c5rbvbl5m5@4ax.com...
>>>>
>>>> Yes, I know. A clean workbench is a sign of a sick mind.
>>>> <http://802.11junk.com/jeffl/pics/home/slides/chain-saw-repair.html>
>>>> It's currently not quite as messy, but it's close.
>>
>>>Looks like you have an antenna harness for phasing 2 meter antennas.
>>
>> I guess you mean the Wilkinson power divider/splitter in the lower
>> left. It's not for phasing antennas, but for combining the signals
>> from two receive only 1090MHz antennas for ADS-B reception. The lines
>> are 3/4 electrical wavelengths long RG-6a/u because I couldn't find
>> any small diameter 75 ohm coax. That was a prototype I just threw
>> together to see if I really needed the 100 ohm resistor for receive
>> only. With low gain antennas, it's not needed. For high gain, where
>> impedance matching is more important, it's needed.

>I know about the Wilkinsson devider. Not sure if it is done now, but the
>CBers would put two antennas on their cars and especially the big trucks.
>Feed them with a T and 1/4 wavelengths of coax if I recall corectly.

Yep. It was called a "co-phasing harness". Basically, the same thing
as a Wilkinson power divider. The original purpose was to deal with
the problem that the truckers were having with mounting antennas on
their big rigs. The antenna could not be mounted on top of the
tractor or trailer because the weight scale operators did not like
antennas smashing into the overhead clearance gauges. However, one
antenna on the side of the tractor didn't work very well because it
blocked signals on the other side. Two antennas were just fine. The
only problem was that while in receive, there was little loss from
either antenna, in transmit, the power was split equally between
sides. To compensate, doubling the transmit power was deemed
necessary. It worked.

At the time 1973(?), I was working on an ill fated CB related project
that would eventually have Antenna Specialists' name on it. I
discussed the co-phasing harness problem with one of their engineers.
He mumbled something about it being a great way to double antenna
sales. The rest you can guess.

>Thought you were going to do that to the chain saw for 2 meters to help out
>your handy talkey while sawing wood. As if you could hear it over the
>noise.

Yacking on the radio while operating a rather dangerous piece of
machinery is not a great idea. If someone wants to yell at me, they
can wait until I'm done sawing.

>I have not looked over the power devider in a long time. I was thinking the
>100 ohm resistor was mainly to absorbe the unballanced power. If everything
>was matched you could leave it out, but as you well know, nothing is perfect
>in the RF world.

True for a splitter. Not quite so true for a combiner. It's main
purpose it to provide the best possible isolation between input ports.
The phase shift through the *TWO* 1/4 wave lines, combined through the
100 ohm resistor, exactly cancel, which provides the necessary
isolation. If you look at the specs for a combiner, you'll see the
isolation specification.

>What are you using for a receiver for the ADS-B ?

One of the receive stations for one of the aircraft monitoring
networks.
<http://planefinder.net>
<http://my.pinkfroot.com>
<http://Flightradar24.com>

>I have one of the dongles
>that plugs into the usb of a computer on order. Should be here Monday. It
>tunes from about 25 MHz to over 1 Ghz from the writeups. Off ebay here is
>the item number.
>310655269457
>I don' t see how they can make and ship a device like that for only $ 11.00.

Yep, very cheap. I couldn't afford to ship an empty box for that
price.
<http://www.ebay.com/itm/310655269457>
There are numerous projects on the web for turning it into everything
from a spectrum analyzer to a radio scanner.
<http://www.hamradioscience.com/building-an-inexpensive-ads-b-receiving-and-sharing-statio
n/>
<http://panteltje.com/panteltje/xpsa/index.html>
I could use one of those RTL8232U dongles, but I have a different
problem to solve. 1090MHz is in the middle of the frequencies used by
DME (distance measuring equip) which provides a challenge in
interference reduction using DSP. The receivers will probably be
located in the middle of transmitter infested mountain tops, which

means they need a really good IM tolerant front end. The antenna problem is also unique in that it requires maximum gain toward the horizon in order to maximize range, but also must still have some gain overhead to hear closer aircraft. I combine two antennas for the purpose.
<http://802.11junk.com/jeffl/antennas/AMOS-3-INV-1090Mhz/index.html>

--
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Skype: JeffLiebermann AE6KS 831-336-2558

372. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-13 00:36:26 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <jf-dnbZbffEWqA3MnZ2dnUVZ_rednZ2d@earthlink.com>
Source record: 245

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:1090p8lndvbkhcq74tj8gpo059m3513ivi@4ax.com...
> Yep. It was called a "co-phasing harness". Basically, the same thing
> as a Wilkinson power divider. The original purpose was to deal with
> the problem that the truckers were having with mounting antennas on
> their big rigs. The antenna could not be mounted on top of the
> tractor or trailer because the weight scale operators did not like
> antennas smashing into the overhead clearance gauges. However, one
> antenna on the side of the tractor didn't work very well because it
> blocked signals on the other side. Two antennas were just fine. The
> only problem was that while in receive, there was little loss from
> either antenna, in transmit, the power was split equally between
> sides. To compensate, doubling the transmit power was deemed
> necessary. It worked.
>
> At the time 1973(?), I was working on an ill fated CB related project
> that would eventually have Antenna Specialists' name on it. I
> discussed the co-phasing harness problem with one of their engineers.
> He mumbled something about it being a great way to double antenna
> sales. The rest you can guess.
>

During that period of time I repaired things for the CBers to pick up some extra spending money. I was thinking there was a mobile antenna system that you mounted two antennas and had a switch box that phased them for differant directions. Don't believe it worked too well as the antennas were usually too close together. The the base station 'scanner' antenna was devoloped using 3 verticals in a triangle patern several feet apart. Seemed to work ok for what it was.

During that period of time, I think Antenna Specialists' made up much of the CB antenna sales.

Only double the power,, many of the ones I knew ran 50 to 100 watts in the mobiles back in the 70's . During those years you could sell almost anything to the CB. Much like for the last number of years you can sell to the audio/hifi people. Best scam I know of is the wire going from the hifi to the wall socket. For about $ 120 you get 6 to 8 feet of 'special wire' Even if it was special that would not account for the wire going from the outlet to the breaker box and then to th epole transformer..

373. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-13 01:45:00 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <4lg0p85dgqhqbe2q7rl0rn6sjsmsto83kd@4ax.com>
Source record: 246

On Sun, 12 May 2013 20:36:26 -0400, "Ralph Mowery"
<rmowery28146@earthlink.net> wrote:

>I was thinking there was a mobile antenna system that
>you mounted two antennas and had a switch box that phased them for differant
>directions. Don't believe it worked too well as the antennas were usually
>too close together.

Chuckle. That's because the co-phasing harness combiner would produce
a giant null in the fore and aft directions. The box had a 3 position
switch, that selected antenna 1, 2, or both. The problem was that
there was no way to use a real Wilkinson splitter with the switch, so
the both position was simply both antennas in parallel. That didn't
work.

>The the base station 'scanner' antenna was devoloped
>using 3 verticals in a triangle patern several feet apart. Seemed to work
>ok for what it was.

It's still being sold and it actually works fairly well. It's just a
VHF/UHF version of an HF "fan" antenna, where each band has its own
dipole. Well, for the scanner antenna, a monopole.

The stranger looking the antenna, the better is works (and sells).

>During that period of time, I think Antenna Specialists' made up much of the
>CB antenna sales.

Yep. I wasn't involved in antenna design at the time, but I did meet
with some of the designers. The RF part of the design was minimal.
The aesthetics, cosmetics, packaging, and sales pitch were the major
considerations.

>Only double the power,, many of the ones I knew ran 50 to 100 watts in the
>mobiles back in the 70's.

It started with doubling the power, again for good reason caused by
the power divider. Radios had such features on the schematic as
"Don't short this resistor or you will transmit at illegal power
levels". That would usually get the typical 23 channel CB up to about
12 watts in. Linears came later.

Incidentally, in about 1979, I worked on a marine 2-30MHz HF SSB
transmitter. The 150 watt power amplifier was my design. Sales of
"replacement" power amplifiers were rather high until management found
out what the dealers were doing with them. Oh well.

>During those years you could sell almost
>anything to the CB. Much like for the last number of years you can sell to
>the audio/hifi people. Best scam I know of is the wire going from the hifi
>to the wall socket. For about $ 120 you get 6 to 8 feet of 'special wire'
>Even if it was special that would not account for the wire going from the
>outlet to the breaker box and then to th epole transformer..

Got $10,000?
<http://www.amazon.com/Denon-AKDL1-Dedicated-Link-Cable/dp/B000I1X6PM>
There probably should be a law against this, but on the other hand,
the purchase of such an overpriced cable is probably its own
punishment.

--
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

374. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-14 02:57:12 UTC
From: tom <news4792@taring.org>
Message-ID: <w66dnYmzYriaNQzMnZ2dnUVZ_j-dnZ2d@iphouse.net>
Source record: 247

On 5/11/2013 8:42 PM, tom wrote:
> On 5/11/2013 8:34 PM, tom wrote:
>>
>> Best buys on AGM batteries is to look for 3 to 5 year old ones being
>> rotated out from data centers that demand high reliablity. They are
>> usually rated for at least a 20 year life. And are 0 maintenance to
>> boot.
>>
>> tom
>> K0TAR
>>
>
> And finding the used ones isn't hard. I found the 133AH on craigs list.
>
> Be sure to buy identical types. My 2 are not the same AH rating but are
> from the same line by the same manufacturer.
>
> tom
> K0TAR
>

mcalhoun asked me a question via email. I replied but my response was
rejected -

Delay reason: SMTP error from remote mailer after RCPT
TO:<mcalhoun@xxxx.yyy>:
host mail.xxxx.zzzz [ipv4 address]: 451 4.7.1 Greylisting in
action, please come back later

Sorry, your end is unnecessarily paranoid.

Mine is selectively paranoid. You should get one of those. :)

tom
K0TAR

375. Re: Battery charging question??

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-14 11:23:53 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <d9pkt.15394$lh6.2249@newsfe16.iad>
Source record: 248

I am noticing a lot of fuel lines up here in Ontario are failing because of the newly introduced or mandated or shoved down our throats Alcohol or Ethenol they are putting 15% in the fuels. One dealer around here actually doubled that amount and was caught and fined now is paying for everyone's fuel lines, gaskets, seals that were eaten by the ethenol they mix in the fuels. We are seeing this happen around here and boat owners and chainsaw owners etc etc are squacking.

Thanks for all the great advice on batteries gents, I appreciate it all and thank you.

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:e410p85tj9orrbs2aesi7k1r1ktvohobj3@4ax.com...
> On Sun, 12 May 2013 16:34:53 -0400, "Ralph Mowery"
> <rmowery28146@earthlink.net> wrote:
>
>>"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
>>news:6vcuo89l1qsgtkq6uqbp6r75c5rbvbl5m5@4ax.com...
>>>
>>> Yes, I know. A clean workbench is a sign of a sick mind.
>>> <http://802.11junk.com/jeffl/pics/home/slides/chain-saw-repair.html>
>>> It's currently not quite as messy, but it's close.
>
>>Looks like you have an antenna harness for phasing 2 meter antennas.
>
> I guess you mean the Wilkinson power divider/splitter in the lower
> left. It's not for phasing antennas, but for combining the signals
> from two receive only 1090MHz antennas for ADS-B reception. The lines
> are 3/4 electrical wavelengths long RG-6a/u because I couldn't find
> any small diameter 75 ohm coax. That was a prototype I just threw
> together to see if I really needed the 100 ohm resistor for receive
> only. With low gain antennas, it's not needed. For high gain, where
> impedance matching is more important, it's needed.
>
>>Is the
>>chain saw apart to put the co-phased antennas on ? hihi..
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> The chain saw has nothing to do with RF, unless you include using the
> trees as supports for various HF antennas. In this case, the only
> thing wrong with the saw was that the fuel line split and started
> leaking. In order to replace a simple fuel line, I had to tear down
> the saw completely. I used the occasion to also clean out the
> accumulated crud, clean the carb, replace various filters, clean the
> carbon out of the exhaust port, and do the usual tuneup. Right now,
> the bench has two weed whackers torn apart. Since I took them apart

> about 2 weeks ago, I don't remember which parts belong to which
> engine. This should be interesting...
>
>
>
>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558
>

376. Test

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-21 16:09:52 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <b%Mmt.3456$Ju6.3202@newsfe22.iad>
Source record: 249

I know this is not the way to test, but I haven't seen a new post in 8 days!

Hopefully it's just because the group is quiet although I like it when
there's lots
of activity on a good discussion -- not fractals though!

Irv VE6BP

377. Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-21 20:00:02 UTC
From: David Ryeburn <david_ryeburn@telus.netz>
Message-ID: <david_ryeburn-3ABA7D.13000221052013@news.eternal-september.org>
Source record: 250
Body handling: HTML body converted to readable text

In article ,
"Irv Finkleman" wrote:

> ... I haven't seen a new post in 8 days!
...
> I like it when there's lots of activity on a good discussion

OK. Here's a question for someone who likes to model things.

I'll soon (if Industry Canada gets around to processing the exam which I passed) be VE7??? and I'd like to go backpacking with a QRP CW transceiver. I want to use a current balun at the antenna and RG-174 feedline because I've got a pacemaker inside me (else I'd just use an end-fed halfwave). I'd prefer to have a single antenna I can use on multiple bands.

Suppose I built a triangular closed loop one full wave long on 40 metres, with sides about 14.5 m long (whatever it takes to be resonant on the low end of 40). I'd stretch one 14.5 m side between high branches of two tall conifers at my camp and the other two sides would slope downward and toward each other, meeting maybe 1 m above ground where they'd be connected to each other, with thin rope continuing from that junction point on down to a stake. I'd want to use this on 40, 20, 15, and 10, and if I went out to the back where the two down-sloping wires were connected together and disconnected them I'd then have an open loop which would be a little long for a half-wave on 80 and more than a little long for three half-waves on 30. What sorts of impedances would the poor balun be subjected to on the various bands?

I'm not that worried about the SWR on the feedline or the impedance at the transmitter; the latter can be dealt with by using an antenna tuner. But if the balun is subjected to a load impedance that's too high or too reactive, maybe it won't do its job well enough and some current will come down the outside of the coax. My pacemaker might not like that.

David, ex-W8EZE 45 years ago and soon to be a VE7

--
David Ryeburn
david_ryeburn@telus.netz
To send e-mail, change "netz" to "net"

378. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-21 20:45:34 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <kngm66$6r4$1@dont-email.me>
Source record: 1
Body handling: HTML body converted to readable text

On 5/21/2013 3:00 PM, David Ryeburn wrote:
> In article ,
> "Irv Finkleman" wrote:
>
>> ... I haven't seen a new post in 8 days!
> ...
>> I like it when there's lots of activity on a good discussion
>
> OK. Here's a question for someone who likes to model things.
>
> I'll soon (if Industry Canada gets around to processing the exam which I
> passed) be VE7??? and I'd like to go backpacking with a QRP CW
> transceiver. I want to use a current balun at the antenna and RG-174
> feedline because I've got a pacemaker inside me (else I'd just use an
> end-fed halfwave). I'd prefer to have a single antenna I can use on
> multiple bands.
>
> Suppose I built a triangular closed loop one full wave long on 40
> metres, with sides about 14.5 m long (whatever it takes to be resonant
> on the low end of 40). I'd stretch one 14.5 m side between high branches
> of two tall conifers at my camp and the other two sides would slope
> downward and toward each other, meeting maybe 1 m above ground where
> they'd be connected to each other, with thin rope continuing from that
> junction point on down to a stake. I'd want to use this on 40, 20, 15,
> and 10, and if I went out to the back where the two down-sloping wires
> were connected together and disconnected them I'd then have an open loop
> which would be a little long for a half-wave on 80 and more than a
> little long for three half-waves on 30. What sorts of impedances would
> the poor balun be subjected to on the various bands?
>
> I'm not that worried about the SWR on the feedline or the impedance at
> the transmitter; the latter can be dealt with by using an antenna tuner.
> But if the balun is subjected to a load impedance that's too high or too
> reactive, maybe it won't do its job well enough and some current will
> come down the outside of the coax. My pacemaker might not like that.
>
> David, ex-W8EZE 45 years ago and soon to be a VE7
>

How many V/M can your pacemaker tolerate?

379. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-21 22:05:11 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <ncSmt.16878$xl6.6685@newsfe15.iad>
Source record: 2
Body handling: HTML body converted to readable text

I've had a pacemaker for years and have operated using open wire feeder, and
often end fed antennas with a counterpoise ground in my suite. Never had a
problem. From what I understand, most pacemakers will not be bothered, and
if they are,
you would soon feel the difference -- quick enough to key up. At QRP levels
it's
highly unlikely you will notice anything.

Irv VE6BP

"David Ryeburn" wrote in message
news:david_ryeburn-3ABA7D.13000221052013@news.eternal-september.org...
> In article ,
> "Irv Finkleman" wrote:
>
>> ... I haven't seen a new post in 8 days!
> ...
>> I like it when there's lots of activity on a good discussion
>
> OK. Here's a question for someone who likes to model things.
>
> I'll soon (if Industry Canada gets around to processing the exam which I
> passed) be VE7??? and I'd like to go backpacking with a QRP CW
> transceiver. I want to use a current balun at the antenna and RG-174
> feedline because I've got a pacemaker inside me (else I'd just use an
> end-fed halfwave). I'd prefer to have a single antenna I can use on
> multiple bands.
>
> Suppose I built a triangular closed loop one full wave long on 40
> metres, with sides about 14.5 m long (whatever it takes to be resonant
> on the low end of 40). I'd stretch one 14.5 m side between high branches
> of two tall conifers at my camp and the other two sides would slope
> downward and toward each other, meeting maybe 1 m above ground where
> they'd be connected to each other, with thin rope continuing from that
> junction point on down to a stake. I'd want to use this on 40, 20, 15,
> and 10, and if I went out to the back where the two down-sloping wires
> were connected together and disconnected them I'd then have an open loop
> which would be a little long for a half-wave on 80 and more than a
> little long for three half-waves on 30. What sorts of impedances would
> the poor balun be subjected to on the various bands?
>
> I'm not that worried about the SWR on the feedline or the impedance at
> the transmitter; the latter can be dealt with by using an antenna tuner.
> But if the balun is subjected to a load impedance that's too high or too

> reactive, maybe it won't do its job well enough and some current will
> come down the outside of the coax. My pacemaker might not like that.
>
> David, ex-W8EZE 45 years ago and soon to be a VE7
>
> --
> David Ryeburn
> david_ryeburn@telus.netz
> To send e-mail, change "netz" to "net"

380. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-22 06:13:40 UTC
From: David Ryeburn <david_ryeburn@telus.netz>
Message-ID: <david_ryeburn-71E0BE.23134021052013@news.eternal-september.org>
Source record: 3

In article <ncSmt.16878$xl6.6685@newsfe15.iad>,
"Irv Finkleman" <finkirv@shaw.ca> wrote:

> I've had a pacemaker for years and have operated using open wire feeder, and
> often end fed antennas with a counterpoise ground in my suite. Never had a
> problem. From what I understand, most pacemakers will not be bothered, and
> if they are,
> you would soon feel the difference -- quick enough to key up. At QRP levels
> it's
> highly unlikely you will notice anything.

That's good to know. But I'd still be worried. I'd hate to be 10 km up a steep trail and after supper find that my pacemaker was acting up when I fired up the rig.

In article <kngm66$6r4$1@dont-email.me>, John S <Sophi.2@invalid.org>
wrote:

> How many V/M can your pacemaker tolerate?

I have no idea. And I suspect if I asked my cardiologist he'd ask "why do you want to know" and if I told him I wanted to operate a ham radio transmitter while many km away from other people up in the mountains, he'd just say "don't do that".

Anyway, I'd still like to know how well or how badly my triangular antenna idea (closed loop for 40, 20, 15, or 10 and open loop for 80 or 30) would work. I'll probably get an Elecraft KX3 which has a very wide range antenna tuner option, so I'm sure it would match such an antenna system, but I wonder how much stress would be put on the current balun, and what sort of patterns I'd get on the different bands. The latter might have some influence on how I oriented the antenna at installation, assuming there were enough trees around that I'd have a choice. I suspect it's a pretty good, and certainly simple, multi-band antenna setup, with relatively low feedpoint impedance on all bands, but it would be nice to know that I'm right about that.

David, who just found out that he's now VE7EZM

--
David Ryeburn
david_ryeburn@telus.netz
To send e-mail, change "netz" to "net"

381. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-22 08:33:57 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <knhvmcvvu1@dont-email.me>
Source record: 4
Body handling: HTML body converted to readable text

On 5/21/2013 3:00 PM, David Ryeburn wrote:
> In article ,
> "Irv Finkleman" wrote:
>
>> ... I haven't seen a new post in 8 days!
> ...
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> OK. Here's a question for someone who likes to model things.
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> I'll soon (if Industry Canada gets around to processing the exam which I
> passed) be VE7??? and I'd like to go backpacking with a QRP CW
> transceiver. I want to use a current balun at the antenna and RG-174
> feedline because I've got a pacemaker inside me (else I'd just use an
> end-fed halfwave). I'd prefer to have a single antenna I can use on
> multiple bands.
>
> Suppose I built a triangular closed loop one full wave long on 40
> metres, with sides about 14.5 m long (whatever it takes to be resonant
> on the low end of 40). I'd stretch one 14.5 m side between high branches
> of two tall conifers at my camp and the other two sides would slope
> downward and toward each other, meeting maybe 1 m above ground where
> they'd be connected to each other, with thin rope continuing from that
> junction point on down to a stake. I'd want to use this on 40, 20, 15,
> and 10, and if I went out to the back where the two down-sloping wires
> were connected together and disconnected them I'd then have an open loop
> which would be a little long for a half-wave on 80 and more than a
> little long for three half-waves on 30. What sorts of impedances would
> the poor balun be subjected to on the various bands?
>
> I'm not that worried about the SWR on the feedline or the impedance at
> the transmitter; the latter can be dealt with by using an antenna tuner.
> But if the balun is subjected to a load impedance that's too high or too
> reactive, maybe it won't do its job well enough and some current will
> come down the outside of the coax. My pacemaker might not like that.
>
> David, ex-W8EZE 45 years ago and soon to be a VE7
>

EZNEC says the feed-point impedance at the bottom "V" is:

80M 1639 - J 11890 ohms
40M 128.9 + J 0.4186 ohms (design center)
30M 3364 - J 409.1 ohms

20M 222.6 + J 171.4 ohms
15M 119.5 + J 301.5 ohms
10M 401.1 + J 412.7 ohms

Not including the effects of tree proximity, of course.

382. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-23 00:01:37 UTC
From: nm5k@wt.net
Message-ID: <6371aa22-c773-4b81-9442-53a71ab2cd16@googlegroups.com>
Source record: 5
Body handling: HTML body converted to readable text

On Tuesday, May 21, 2013 3:00:02 PM UTC-5, David Ryeburn wrote:
> In article ,
>
> "Irv Finkleman" wrote:
>
>
>
> > ... I haven't seen a new post in 8 days!
>
> ...
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> > I like it when there's lots of activity on a good discussion
>
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>
> OK. Here's a question for someone who likes to model things.
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>
>
> I'll soon (if Industry Canada gets around to processing the exam which I
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> passed) be VE7??? and I'd like to go backpacking with a QRP CW
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> transceiver. I want to use a current balun at the antenna and RG-174
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> feedline because I've got a pacemaker inside me (else I'd just use an
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> end-fed halfwave). I'd prefer to have a single antenna I can use on
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> and 10, and if I went out to the back where the two down-sloping wires
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> were connected together and disconnected them I'd then have an open loop
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> little long for three half-waves on 30. What sorts of impedances would
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> the poor balun be subjected to on the various bands?
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> I'm not that worried about the SWR on the feedline or the impedance at
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> the transmitter; the latter can be dealt with by using an antenna tuner.
>
> But if the balun is subjected to a load impedance that's too high or too
>
> reactive, maybe it won't do its job well enough and some current will
>
> come down the outside of the coax. My pacemaker might not like that.
>
>
>
> David, ex-W8EZE 45 years ago and soon to be a VE7
>

I suppose it would work. Another option which I've used
camping a number of times is a dipole with insulators
breaking up the various bands. You can then use short
jumper wires with clips to bypass the insulators for low
band use.
I usually used a 80 meter dipole as the full length,
and then insulators/jumpers for whichever higher bands
I'd want to use.
One advantage to this system is no tuner needed, and no
tuner losses. And it can be fed with light coax, and the
current balun, which should keep the feed line fairly
cool at the operating position.

Would be kind of like this for 80/40/20.

o----o----o--00--o----o----o

383. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-23 00:46:43 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <rmnqp8lsd6kpelpr2jq3d9of8os2g5blk7@4ax.com>
Source record: 6

On Tue, 21 May 2013 13:00:02 -0700, David Ryeburn
<david_ryeburn@telus.netz> wrote:

>Suppose I built a triangular closed loop one full wave long on 40
>metres, with sides about 14.5 m long (whatever it takes to be resonant
>on the low end of 40). I'd stretch one 14.5 m side between high branches
>of two tall conifers at my camp and the other two sides would slope
>downward and toward each other, meeting maybe 1 m above ground where
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>and 10, and if I went out to the back where the two down-sloping wires
>were connected together and disconnected them I'd then have an open loop
>which would be a little long for a half-wave on 80 and more than a
>little long for three half-waves on 30. What sorts of impedances would
>the poor balun be subjected to on the various bands?

It's called a "Delta Loop" antenna.
<https://www.google.com/search?q=delta+loop+antenna&tbm=isch>

>I'm not that worried about the SWR on the feedline or the impedance at
>the transmitter; the latter can be dealt with by using an antenna tuner.
>But if the balun is subjected to a load impedance that's too high or too
>reactive, maybe it won't do its job well enough and some current will
>come down the outside of the coax. My pacemaker might not like that.

I don't have a pacemaker but know plenty of older hams that have them.
I was asked to measure and calculate the risks for one ham a few years
ago. Basically, RF is not a problem as pacemakers are well shielded
and tested for RF sensitivity. As long as you stay within the FCC's
MPE (max permissible exposure) limits, you're well within the
pacemakers safety margins. Medtronics specifies that their units will
work up to 100 V/m field strength.
<http://www.arrl.org/files/file/Technology/Pacemaker/EMC%20Worksite%20Letter.pdf>

The RF risk is NOT in any reflected power or VSWR, but rather in the
normal signal produced by the antenna. Just assume that you're in the
worst possible location, even if the antenna is many feet over your
head. Do the numbers on your RF exposure to see how close to you
antenna you can operate. Unless you're running maximum legal power,
you should have any problems in the HF bands.

The real danger is from magnetic fields tripping the magnetic sensors
in the pacemaker used to program and download data from the unit.
Magnetic fields come in all manner of shape and sizes. You might
consider playing with a Gauss/Teslas meter before tangling with high
current DC (solar power, automotive alternators, battery chargers, DC

operated HF equipment, etc). Don't worry about the AC power line fields. The pacemaker can reject those. Just the static fields. Like this:
<http://www.ebay.com/itm/400475344785?>
Or, you can build something with a compass or Hall-Effect detector. Note that these are NOT the common trifield Gaussmeter which only does AC fields, usually from 30 to 2000 Hz.

The ARRL's view on pacemakers:
<http://www.arrl.org/pacemaker>

>David, ex-W8EZE 45 years ago and soon to be a VE7

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

384. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-23 17:10:54 UTC
From: seediq <nowhere@driveby.com>
Message-ID: <s4snt.136213$97.119818@en-nntp-16.dc1.easynews.com>
Source record: 7

On 5/22/2013 1:13 AM, David Ryeburn wrote:
> In article <ncSmt.16878$xl6.6685@newsfe15.iad>,
> "Irv Finkleman" <finkirv@shaw.ca> wrote:
>
>> I've had a pacemaker for years and have operated using open wire feeder, and
>> often end fed antennas with a counterpoise ground in my suite. Never had a
>> problem. From what I understand, most pacemakers will not be bothered, and
>> if they are,
>> you would soon feel the difference -- quick enough to key up. At QRP levels
>> it's
>> highly unlikely you will notice anything.
>
> That's good to know. But I'd still be worried. I'd hate to be 10 km up a
> steep trail and after supper find that my pacemaker was acting up when I
> fired up the rig.
>
> In article <kngm66$6r4$1@dont-email.me>, John S <Sophi.2@invalid.org>
> wrote:
>
>> How many V/M can your pacemaker tolerate?
>
> I have no idea. And I suspect if I asked my cardiologist he'd ask "why
> do you want to know" and if I told him I wanted to operate a ham radio
> transmitter while many km away from other people up in the mountains,
> he'd just say "don't do that".
>
> Anyway, I'd still like to know how well or how badly my triangular
> antenna idea (closed loop for 40, 20, 15, or 10 and open loop for 80 or
> 30) would work. I'll probably get an Elecraft KX3 which has a very wide
> range antenna tuner option, so I'm sure it would match such an antenna
> system, but I wonder how much stress would be put on the current balun,
> and what sort of patterns I'd get on the different bands. The latter
> might have some influence on how I oriented the antenna at installation,
> assuming there were enough trees around that I'd have a choice. I
> suspect it's a pretty good, and certainly simple, multi-band antenna
> setup, with relatively low feedpoint impedance on all bands, but it
> would be nice to know that I'm right about that.
>
> David, who just found out that he's now VE7EZM
>
I am a loop fanboy. I admit it. I do not know how well you triangular
loop would work. I have only used horizontal 4 point square loops.
However, I would advise that it seems to me to not make enough sense to
be using a loop out in the wilderness. I only use a loop because I live

right in the middle of town and I need to suppress the local qrn. There is plenty of it. I would think that a dipole fed with coax or open wire line (for multi-band use) would work just as well.

If you are able to feel your heartbeat and can tell if there is some sort of problem with the key down, of course you know that your pacemaker is sensitive to RFI. My own heart was exposed to 20,000 volts with RF riding on it when I was young. I have always been able to feel my own heart beat after that event. BTW, it took me a year to recover from this exposure to high voltage. The good news is that I can tell whenever I am doing something that is effecting my heart rate or rhythm. This is pretty important when trying a new drug.

I also think that running much power where you cannot call an ambulance might be a risky thing to do. If you are the only who would be effected by your death, than you have the right to experiment. If you are married and have children, I believe you must consider their welfare. None of us has the right to be cavalier with our safety if our death would negatively impact someone. Just my opinion of course.

Michael

385. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-23 19:28:40 UTC
From: nm5k@wt.net
Message-ID: <1bbdb891-7134-42ef-9156-dfdafeeb3ee4@googlegroups.com>
Source record: 8

On Thursday, May 23, 2013 12:10:54 PM UTC-5, seediq wrote:
None of us
>
> has the right to be cavalier with our safety if our death would
>
> negatively impact someone. Just my opinion of course.
>
>
>
> Michael

I can "feel" when I'm in a high RF environment. And I seem
to be effected more by lower frequencies, than I do high.
I've "felt" RF at home once when running 160 meters with
a antenna fed from the shack.
And I've also felt it when running mobile, with the antenna
behind my head on the trunk lid. This was noticed when
running CW on I think 80m if I remember right.
And I have no pacemaker, etc, and was in normal health.
I didn't feel pain per say. It made me feel nervous and
uneasy. Hard to explain really.. But it definitely would
start and stop with my sending. It took a while before
I realized what was happening, and then I tested it with
sending tests. Sure nuff, every time I would start sending,
I would start feeling the effects. Quit sending, and it would
go away.
This was with a plastic bugcatcher mounted on the trunk
lid, with the loading coil just above roof level.
Running 100w CW. I've never really noticed it using SSB.
Too sporadic I expect, where as CW is pretty much pedal
to the metal when actually transmitting.

In both cases, I was near the current maximum. At my
table in the 160m case, and beaming the back of my head
in the car.
But I don't see this as being much of an issue with QRP.
Particularly if the feed line is decoupled, and the
actual antenna is a good bit away from the operator.

386. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-24 00:59:26 UTC
From: David Ryeburn <david_ryeburn@telus.netz>
Message-ID: <david_ryeburn-01F1B8.17592623052013@news.eternal-september.org>
Source record: 9

In article <knhvmcvvu1@dont-email.me>, John S <Sophi.2@invalid.org>
wrote:

> EZNEC says the feed-point impedance at the bottom "V" is:
>
> 80M 1639 - J 11890 ohms
> 40M 128.9 + J 0.4186 ohms (design center)
> 30M 3364 - J 409.1 ohms
> 20M 222.6 + J 171.4 ohms
> 15M 119.5 + J 301.5 ohms
> 10M 401.1 + J 412.7 ohms
>
> Not including the effects of tree proximity, of course.

Thanks for doing this. Many Windows programs will run under CrossOver (a Mac implementation of WINE) on my Mac, but unfortunately EZNEC is not one of them.

When you say bottom "V" do you mean you are you feeding the thing down where the two sloping legs come together near ground level? That wasn't my plan; I would have an insulator up in the air halfway between the two high tree branches, and attach a balun and the coax feed line at that point. The low point at the back, where the two sloping legs meet, would simply have them joined together there (or not, on 80 and 30) and I wouldn't feed it there.

What frequencies in each of these bands did you use? I'm a bit surprised at the relatively high reactance on 20, 15 and 10. I'd want to cut the thing for the CW ends of the bands. Unless you cut the antenna right at the bottom end of the band, the harmonic resonances march up into the bands as you move to the higher frequency bands, so I'd expect the antenna to be too short at the CW ends of the bands on the higher bands. E.g. if design frequency is 7.05 MHz then we're looking at 14.1 MHz, 21.15 MHz, and 28.2 MHz whereas I'm going to want to operate around 14.05, 21.05, and 28.05.

Also the high resistance and high capacitive reacance for your figures on 80 and 20 makes me suspect that your analysis is with the loop closed on those bands. My idea was to walk around to the back and unclip the jumper there, so that instead of a loop, on 80 and on 30 it would be a doublet all bent into a sloping triangle, somwhat more than a half wave long on 80 and a bit les than 3/2 waves long on 30. I'm taking into account end effect only at the "ends", where the two sloping wires are now detached from each other, on 30. So the 5% shortening would only apply to the last quarter wave on each side (ending at that low-height insulator), not to the two half wave sections either side of the center

insulator, and since 492*2 + 468 = 1452, I'd expect the resonant length at 10.125 MHz to be 1452/10.125 = 143.4 ft, while 1005/7.05 = 142.55 ft would be the calculated length for a full-wave 40 m loop. So I'd expect relatively low resistance at the feedpoint on 80 and 40, with reactance moderately high and inductive on 80 (where it's a good bit too long for a half-wave) and pretty low and slightly capacitive on 30 (where it's just a bit too short for 3/2 wave).

If you ran the analysis with the loop closed on those two bands, would you mind doing it over with the loop open?

In article <6371aa22-c773-4b81-9442-53a71ab2cd16@googlegroups.com>, nm5k@wt.net wrote:

> I suppose it would work. Another option which I've used
> camping a number of times is a dipole with insulators
> breaking up the various bands. You can then use short
> jumper wires with clips to bypass the insulators for low
> band use.
> I usually used a 80 meter dipole as the full length,
> and then insulators/jumpers for whichever higher bands
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> One advantage to this system is no tuner needed, and no
> tuner losses. And it can be fed with light coax, and the
> current balun, which should keep the feed line fairly
> cool at the operating position.
>
> Would be kind of like this for 80/40/20.
>
> o----o----o--00--o----o----o

That was my first idea. But you have to lower the antenna to change bands. With my loop/non-loop all you have to do when you switch between 40/20/15/10 on the one hand and 80/30 on the other, is to walk around to the back of the antenna and clip or unclip the jumper which is only a few feet off the ground. At age 77 I'm pretty lazy and lowering/raising the antenna to change bands is not my idea of how to enjoy a backpacking trip at the end of a long day. Put the thing up once before supper and take it down once after breakfast sounds like less effort. Before I bought a Bear Vault to use instead of ropes in trees for food protection, I had to haul the food up after supper and lower it before breakfast. Doing something similar several times with an antenna just to change bands? No, thanks.

David, VE7EZM and I hope soon W7???

--
David Ryeburn
david_ryeburn@telus.netz
To send e-mail, change "netz" to "net"

387. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-24 01:08:11 UTC
From: Wayne <mygarbagecan@verizon.net>
Message-ID: <knmeaa$u4l$1@dont-email.me>
Source record: 10

"seediq" wrote in message
news:s4snt.136213$97.119818@en-nntp-16.dc1.easynews.com...

On 5/22/2013 1:13 AM, David Ryeburn wrote:
> In article <ncSmt.16878$xl6.6685@newsfe15.iad>,
> "Irv Finkleman" <finkirv@shaw.ca> wrote:
>
>> I've had a pacemaker for years and have operated using open wire feeder,
>> and
>> often end fed antennas with a counterpoise ground in my suite. Never had
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>> problem. From what I understand, most pacemakers will not be bothered,
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>> if they are,
>> you would soon feel the difference -- quick enough to key up. At QRP
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>> it's
>> highly unlikely you will notice anything.
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> That's good to know. But I'd still be worried. I'd hate to be 10 km up a
> steep trail and after supper find that my pacemaker was acting up when I
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> In article <kngm66$6r4$1@dont-email.me>, John S <Sophi.2@invalid.org>
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> I have no idea. And I suspect if I asked my cardiologist he'd ask "why
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> transmitter while many km away from other people up in the mountains,
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> antenna idea (closed loop for 40, 20, 15, or 10 and open loop for 80 or
> 30) would work. I'll probably get an Elecraft KX3 which has a very wide
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> David, who just found out that he's now VE7EZM
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However, I would advise that it seems to me to not make enough sense to
be using a loop out in the wilderness. I only use a loop because I live
right in the middle of town and I need to suppress the local qrn. There
is plenty of it. I would think that a dipole fed with coax or open wire
line (for multi-band use) would work just as well.

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sort of problem with the key down, of course you know that your
pacemaker is sensitive to RFI. My own heart was exposed to 20,000 volts
with RF riding on it when I was young. I have always been able to feel
my own heart beat after that event. BTW, it took me a year to recover
from this exposure to high voltage. The good news is that I can tell
whenever I am doing something that is effecting my heart rate or rhythm.
This is pretty important when trying a new drug.

I also think that running much power where you cannot call an ambulance
might be a risky thing to do. If you are the only who would be effected
by your death, than you have the right to experiment. If you are married
and have children, I believe you must consider their welfare. None of us
has the right to be cavalier with our safety if our death would
negatively impact someone. Just my opinion of course.

Wow....what a bunch of old farts :)
Looks like everybody on this group has a pacemaker.

I haven't had any issues with mine from airport stuff, HF, VHF, etc. I
haven't experimented with magnets or appreciable microwave energy though.

The only time I can fell the pacemaker action is during the periodic checks
when the doc speeds it up or slows it down.

My concern from RF energy would be if noise got introduced that ended up
changing the programmable setting.

So far, so good, but I'm only a couple of years into using mine. However, I
had imagined that it would be more delicate than has turned out to be the
case.

388. Re: Test

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-24 01:29:23 UTC
From: tom <news4792@taring.org>
Message-ID: <k4idnXZsUOXtXwPMnZ2dnUVZ_oqdnZ2d@iphouse.net>
Source record: 11

On 5/21/2013 11:09 AM, Irv Finkleman wrote:
> I know this is not the way to test, but I haven't seen a new post in 8 days!
>
> Hopefully it's just because the group is quiet although I like it when
> there's lots
> of activity on a good discussion -- not fractals though!
>
> Irv VE6BP
>
>

It worked.

tom
K0TAR

389. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-24 12:16:06 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <knnler$487$1@dont-email.me>
Source record: 12

On 5/23/2013 7:59 PM, David Ryeburn wrote:
> In article <knhvmcvvu1@dont-email.me>, John S <Sophi.2@invalid.org>
> wrote:
>
>> EZNEC says the feed-point impedance at the bottom "V" is:
>>
>> 80M 1639 - J 11890 ohms
>> 40M 128.9 + J 0.4186 ohms (design center)
>> 30M 3364 - J 409.1 ohms
>> 20M 222.6 + J 171.4 ohms
>> 15M 119.5 + J 301.5 ohms
>> 10M 401.1 + J 412.7 ohms
>>
>> Not including the effects of tree proximity, of course.
>
> Thanks for doing this. Many Windows programs will run under CrossOver (a
> Mac implementation of WINE) on my Mac, but unfortunately EZNEC is not
> one of them.
>
> When you say bottom "V" do you mean you are you feeding the thing down
> where the two sloping legs come together near ground level? That wasn't
> my plan; I would have an insulator up in the air halfway between the two
> high tree branches, and attach a balun and the coax feed line at that
> point. The low point at the back, where the two sloping legs meet, would
> simply have them joined together there (or not, on 80 and 30) and I
> wouldn't feed it there.
>
> What frequencies in each of these bands did you use? I'm a bit surprised
> at the relatively high reactance on 20, 15 and 10. I'd want to cut the
> thing for the CW ends of the bands. Unless you cut the antenna right at
> the bottom end of the band, the harmonic resonances march up into the
> bands as you move to the higher frequency bands, so I'd expect the
> antenna to be too short at the CW ends of the bands on the higher bands.
> E.g. if design frequency is 7.05 MHz then we're looking at 14.1 MHz,
> 21.15 MHz, and 28.2 MHz whereas I'm going to want to operate around
> 14.05, 21.05, and 28.05.
>
> Also the high resistance and high capacitive reacance for your figures
> on 80 and 20 makes me suspect that your analysis is with the loop closed
> on those bands. My idea was to walk around to the back and unclip the
> jumper there, so that instead of a loop, on 80 and on 30 it would be a
> doublet all bent into a sloping triangle, somwhat more than a half wave
> long on 80 and a bit les than 3/2 waves long on 30. I'm taking into
> account end effect only at the "ends", where the two sloping wires are

> now detached from each other, on 30. So the 5% shortening would only
> apply to the last quarter wave on each side (ending at that low-height
> insulator), not to the two half wave sections either side of the center
> insulator, and since 492*2 + 468 = 1452, I'd expect the resonant length
> at 10.125 MHz to be 1452/10.125 = 143.4 ft, while 1005/7.05 = 142.55 ft
> would be the calculated length for a full-wave 40 m loop. So I'd expect
> relatively low resistance at the feedpoint on 80 and 40, with reactance
> moderately high and inductive on 80 (where it's a good bit too long for
> a half-wave) and pretty low and slightly capacitive on 30 (where it's
> just a bit too short for 3/2 wave).
>
> If you ran the analysis with the loop closed on those two bands, would
> you mind doing it over with the loop open?

7.05MHz 117.3 - J 0.2996 ohms closed loop
3.525MHz 9.365 + J 111.4 ohms open loop
10.125MHz 253.9 + J 60.16 ohms open loop

390. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-24 12:56:50 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <knnnr6ggq1@dont-email.me>
Source record: 13

On 5/24/2013 7:16 AM, John S wrote:
> On 5/23/2013 7:59 PM, David Ryeburn wrote:
>> In article <knhvmcvvu1@dont-email.me>, John S <Sophi.2@invalid.org>
>> wrote:
>>
>>> EZNEC says the feed-point impedance at the bottom "V" is:
>>>
>>> 80M 1639 - J 11890 ohms
>>> 40M 128.9 + J 0.4186 ohms (design center)
>>> 30M 3364 - J 409.1 ohms
>>> 20M 222.6 + J 171.4 ohms
>>> 15M 119.5 + J 301.5 ohms
>>> 10M 401.1 + J 412.7 ohms
>>>
>>> Not including the effects of tree proximity, of course.
>>
>> Thanks for doing this. Many Windows programs will run under CrossOver (a
>> Mac implementation of WINE) on my Mac, but unfortunately EZNEC is not
>> one of them.
>>
>> When you say bottom "V" do you mean you are you feeding the thing down
>> where the two sloping legs come together near ground level? That wasn't
>> my plan; I would have an insulator up in the air halfway between the two
>> high tree branches, and attach a balun and the coax feed line at that
>> point. The low point at the back, where the two sloping legs meet, would
>> simply have them joined together there (or not, on 80 and 30) and I
>> wouldn't feed it there.
>>
>> What frequencies in each of these bands did you use? I'm a bit surprised
>> at the relatively high reactance on 20, 15 and 10. I'd want to cut the
>> thing for the CW ends of the bands. Unless you cut the antenna right at
>> the bottom end of the band, the harmonic resonances march up into the
>> bands as you move to the higher frequency bands, so I'd expect the
>> antenna to be too short at the CW ends of the bands on the higher bands.
>> E.g. if design frequency is 7.05 MHz then we're looking at 14.1 MHz,
>> 21.15 MHz, and 28.2 MHz whereas I'm going to want to operate around
>> 14.05, 21.05, and 28.05.
>>
>> Also the high resistance and high capacitive reacance for your figures
>> on 80 and 20 makes me suspect that your analysis is with the loop closed
>> on those bands. My idea was to walk around to the back and unclip the
>> jumper there, so that instead of a loop, on 80 and on 30 it would be a
>> doublet all bent into a sloping triangle, somwhat more than a half wave
>> long on 80 and a bit les than 3/2 waves long on 30. I'm taking into

>> account end effect only at the "ends", where the two sloping wires are
>> now detached from each other, on 30. So the 5% shortening would only
>> apply to the last quarter wave on each side (ending at that low-height
>> insulator), not to the two half wave sections either side of the center
>> insulator, and since 492*2 + 468 = 1452, I'd expect the resonant length
>> at 10.125 MHz to be 1452/10.125 = 143.4 ft, while 1005/7.05 = 142.55 ft
>> would be the calculated length for a full-wave 40 m loop. So I'd expect
>> relatively low resistance at the feedpoint on 80 and 40, with reactance
>> moderately high and inductive on 80 (where it's a good bit too long for
>> a half-wave) and pretty low and slightly capacitive on 30 (where it's
>> just a bit too short for 3/2 wave).
>>
>> If you ran the analysis with the loop closed on those two bands, would
>> you mind doing it over with the loop open?
>
> 7.05MHz 117.3 - J 0.2996 ohms closed loop
> 3.525MHz 9.365 + J 111.4 ohms open loop
> 10.125MHz 253.9 + J 60.16 ohms open loop
>

Those are free-space values. I forgot to put the ground in. Here they
are revised for the bottom to be about 1.3m above ground...

7.05MHz 123.6 - J 0.02019 ohms closed loop
3.525MHz 13.57 + J 105.7 ohms open loop
10.125MHz 261.7 + J 14.89 ohms open loop

391. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-24 13:07:18 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <knnoerjri1@dont-email.me>
Source record: 14

On 5/24/2013 7:56 AM, John S wrote:
> On 5/24/2013 7:16 AM, John S wrote:
>> On 5/23/2013 7:59 PM, David Ryeburn wrote:
>>> In article <knhvmcvvu1@dont-email.me>, John S <Sophi.2@invalid.org>
>>> wrote:
>>>
>>>> EZNEC says the feed-point impedance at the bottom "V" is:
>>>>
>>>> 80M 1639 - J 11890 ohms
>>>> 40M 128.9 + J 0.4186 ohms (design center)
>>>> 30M 3364 - J 409.1 ohms
>>>> 20M 222.6 + J 171.4 ohms
>>>> 15M 119.5 + J 301.5 ohms
>>>> 10M 401.1 + J 412.7 ohms
>>>>
>>>> Not including the effects of tree proximity, of course.
>>>
>>> Thanks for doing this. Many Windows programs will run under CrossOver (a
>>> Mac implementation of WINE) on my Mac, but unfortunately EZNEC is not
>>> one of them.
>>>
>>> When you say bottom "V" do you mean you are you feeding the thing down
>>> where the two sloping legs come together near ground level? That wasn't
>>> my plan; I would have an insulator up in the air halfway between the two
>>> high tree branches, and attach a balun and the coax feed line at that
>>> point. The low point at the back, where the two sloping legs meet, would
>>> simply have them joined together there (or not, on 80 and 30) and I
>>> wouldn't feed it there.
>>>
>>> What frequencies in each of these bands did you use? I'm a bit surprised
>>> at the relatively high reactance on 20, 15 and 10. I'd want to cut the
>>> thing for the CW ends of the bands. Unless you cut the antenna right at
>>> the bottom end of the band, the harmonic resonances march up into the
>>> bands as you move to the higher frequency bands, so I'd expect the
>>> antenna to be too short at the CW ends of the bands on the higher bands.
>>> E.g. if design frequency is 7.05 MHz then we're looking at 14.1 MHz,
>>> 21.15 MHz, and 28.2 MHz whereas I'm going to want to operate around
>>> 14.05, 21.05, and 28.05.
>>>
>>> Also the high resistance and high capacitive reacance for your figures
>>> on 80 and 20 makes me suspect that your analysis is with the loop closed
>>> on those bands. My idea was to walk around to the back and unclip the
>>> jumper there, so that instead of a loop, on 80 and on 30 it would be a
>>> doublet all bent into a sloping triangle, somwhat more than a half wave

>>> long on 80 and a bit les than 3/2 waves long on 30. I'm taking into
>>> account end effect only at the "ends", where the two sloping wires are
>>> now detached from each other, on 30. So the 5% shortening would only
>>> apply to the last quarter wave on each side (ending at that low-height
>>> insulator), not to the two half wave sections either side of the center
>>> insulator, and since 492*2 + 468 = 1452, I'd expect the resonant length
>>> at 10.125 MHz to be 1452/10.125 = 143.4 ft, while 1005/7.05 = 142.55 ft
>>> would be the calculated length for a full-wave 40 m loop. So I'd expect
>>> relatively low resistance at the feedpoint on 80 and 40, with reactance
>>> moderately high and inductive on 80 (where it's a good bit too long for
>>> a half-wave) and pretty low and slightly capacitive on 30 (where it's
>>> just a bit too short for 3/2 wave).
>>>
>>> If you ran the analysis with the loop closed on those two bands, would
>>> you mind doing it over with the loop open?
>>
>> 7.05MHz 117.3 - J 0.2996 ohms closed loop
>> 3.525MHz 9.365 + J 111.4 ohms open loop
>> 10.125MHz 253.9 + J 60.16 ohms open loop
>>
>
> Those are free-space values. I forgot to put the ground in. Here they
> are revised for the bottom to be about 1.3m above ground...
>
> 7.05MHz 123.6 - J 0.02019 ohms closed loop
> 3.525MHz 13.57 + J 105.7 ohms open loop
> 10.125MHz 261.7 + J 14.89 ohms open loop

And for completeness:

14.05MHz 265.2 + J 78.03 ohms closed loop
21.15MHz 181.4 + J 286.6 ohms closed loop
28.05MHz 322.6 + J 397.5 ohms closed loop

392. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-24 18:34:03 UTC
From: seediq <nowhere@driveby.com>
Message-ID: <noOnt.166949$IR.97126@en-nntp-16.dc1.easynews.com>
Source record: 15

On 5/23/2013 2:28 PM, nm5k@wt.net wrote:
> On Thursday, May 23, 2013 12:10:54 PM UTC-5, seediq wrote:
> None of us
>>
>> has the right to be cavalier with our safety if our death would
>>
>> negatively impact someone. Just my opinion of course.
>>
>>
>>
>> Michael
>
> I can "feel" when I'm in a high RF environment. And I seem
> to be effected more by lower frequencies, than I do high.
> I've "felt" RF at home once when running 160 meters with
> a antenna fed from the shack.
> And I've also felt it when running mobile, with the antenna
> behind my head on the trunk lid. This was noticed when
> running CW on I think 80m if I remember right.
> And I have no pacemaker, etc, and was in normal health.
> I didn't feel pain per say. It made me feel nervous and
> uneasy. Hard to explain really.. But it definitely would
> start and stop with my sending. It took a while before
> I realized what was happening, and then I tested it with
> sending tests. Sure nuff, every time I would start sending,
> I would start feeling the effects. Quit sending, and it would
> go away.
> This was with a plastic bugcatcher mounted on the trunk
> lid, with the loading coil just above roof level.
> Running 100w CW. I've never really noticed it using SSB.
> Too sporadic I expect, where as CW is pretty much pedal
> to the metal when actually transmitting.
>
> In both cases, I was near the current maximum. At my
> table in the 160m case, and beaming the back of my head
> in the car.
> But I don't see this as being much of an issue with QRP.
> Particularly if the feed line is decoupled, and the
> actual antenna is a good bit away from the operator.
>
>
I think you are particularly sensitive to RF. We are all different. I
would be very cautious with RF if I were you. I have found from
experience that the lower the frequency, like 160 meters, the more

penetrating power it has to get into a house or car. I do not understand the mechanism but I sure know this from experience.

Yes, I would expect qrp operation to not be a problem. I run 1200 watts most days with a loop surrounding my home. I get away with it. There are studies that show that active ham radio operators do not live as long as those who are not. They often implicate rf exposure. I personally believe it is actually because it is such a sedentary hobby. We have to get out and walk each day and do our treadmill to keep our heart healthy.

393. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 02:33:17 UTC
From: tom <news4792@taring.org>
Message-ID: <M5GdnXcBN8J3vz3MnZ2dnUVZ_vGdnZ2d@iphouse.net>
Source record: 16

On 5/24/2013 1:34 PM, seediq wrote:
> I think you are particularly sensitive to RF. We are all different. I
> would be very cautious with RF if I were you. I have found from
> experience that the lower the frequency, like 160 meters, the more
> penetrating power it has to get into a house or car. I do not understand
> the mechanism but I sure know this from experience.
>
> Yes, I would expect qrp operation to not be a problem. I run 1200 watts
> most days with a loop surrounding my home. I get away with it. There are
> studies that show that active ham radio operators do not live as long as
> those who are not. They often implicate rf exposure. I personally
> believe it is actually because it is such a sedentary hobby. We have to
> get out and walk each day and do our treadmill to keep our heart healthy.

Slightly off topic.

Or maybe it's because of exposure to vaporized tin/lead solder.

We are electronic hobbyists, or some of us are.

tom
K0TAR

394. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 04:39:40 UTC
From: Sal <salmonella@food>
Message-ID: <knpf2k$a75$1@dont-email.me>
Source record: 17

<nm5k@wt.net> wrote in message
news:1bbdb891-7134-42ef-9156-dfdafeeb3ee4@googlegroups.com...
>
> I can "feel" when I'm in a high RF environment. And I seem
> to be effected more by lower frequencies, than I do high.
> I've "felt" RF at home once when running 160 meters with
> a antenna fed from the shack.
> And I've also felt it when running mobile, with the antenna
> behind my head on the trunk lid. This was noticed when
> running CW on I think 80m if I remember right.
> And I have no pacemaker, etc, and was in normal health.
> I didn't feel pain per say. It made me feel nervous and
> uneasy. Hard to explain really.. But it definitely would
> start and stop with my sending. It took a while before
> I realized what was happening, and then I tested it with
> sending tests. Sure nuff, every time I would start sending,
> I would start feeling the effects. Quit sending, and it would
> go away.
> This was with a plastic bugcatcher mounted on the trunk
> lid, with the loading coil just above roof level.
> Running 100w CW. I've never really noticed it using SSB.
> Too sporadic I expect, where as CW is pretty much pedal
> to the metal when actually transmitting.
>
> In both cases, I was near the current maximum. At my
> table in the 160m case, and beaming the back of my head
> in the car.

I'm sensitive to static charges ... at least I think so. In 1972, I taught a course for technicians working on high-speed Xerox Telecopiers, a run-up to todays FAX machines. It was called LDX, which stood for Long-Distance Xerography.

When I was around those machines, which used multiple static charges to form the images, I was always nervous, anxious and jumpy. I recall an odd smell, similar to the air before a thunderstorm. (ozone?) I never had the same feelings in the classroom, so I'm fairly sure it was the effect of those machines.

"Sal"

395. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 06:48:41 UTC
From: David Ryeburn <david_ryeburn@telus.netz>
Message-ID: <david_ryeburn-71014D.23484124052013@news.eternal-september.org>
Source record: 18

In article <knnoerjri1@dont-email.me>, John S <Sophi.2@invalid.org>
wrote:

> >>> If you ran the analysis with the loop closed on those two bands, would
> >>> you mind doing it over with the loop open?
> >>
> >> 7.05MHz 117.3 - J 0.2996 ohms closed loop
> >> 3.525MHz 9.365 + J 111.4 ohms open loop
> >> 10.125MHz 253.9 + J 60.16 ohms open loop
> >>
> >
> > Those are free-space values. I forgot to put the ground in. Here they
> > are revised for the bottom to be about 1.3m above ground...
> >
> > 7.05MHz 123.6 - J 0.02019 ohms closed loop
> > 3.525MHz 13.57 + J 105.7 ohms open loop
> > 10.125MHz 261.7 + J 14.89 ohms open loop
>
> And for completeness:
>
> 14.05MHz 265.2 + J 78.03 ohms closed loop
> 21.15MHz 181.4 + J 286.6 ohms closed loop
> 28.05MHz 322.6 + J 397.5 ohms closed loop

Many thanks. That confirms what I thought, except that I had expected
the antenna to be on the capacitive side of resonance on 30 metres. All
the figures indicate that my 142.7 ft loop is just a bit too long. The
math I did when I worked for a living was pure math, but I'm all in
favour of being experimental when doing things like this. Now that I've
got a license I'll soon be buying a rig (likely an Elecraft KX3) and
before I take the thing backpacking I'll go to a nearby park and play
with antenna lengths, running a few SWR vs. frequency curves, and come
back home and do a little calculating to see how much I want to shorten
things. It looks from your figures as if it's pretty close to resonance
on 30 metres, so I'll probably shorten it a bit so as to get it too
short on 30 and still a bit too long on 20, and equally bad SWR-wise.
That probably won't change it very much on 40, and will improve it
(slightly) on 80, where the SWR won't matter so much anyway. I'll have
to see whether it improves it very much on 15 and 10, and if not, maybe
shorten it a bit more to make them better if I can do that without
making the lower frequency bands a lot worse. I don't want to fix up 15
and 10 at the expense of making the lower frequency bands, which I'll
undoubtedly use a lot more, really bad. Maybe the best thing to do is to
build a separate antenna for 15 and 10 (and perhaps 6). Anyway, it looks
as if it's time to do some experiments.

I still wish I could do something like what EZNEC does, without going to the trouble of either buying a PC or getting something like Parallels (which lets one install Windows on a Mac) and then buying some version of Windows which I wouldn't use for anything else besides EZNEC. I had hoped that CrossOver would do the job, which it did very nicely for the Windows exam preparation software I downloaded from the Industry Canada and from the Radio Amateurs of Canada websites. Does anyone know of antenna modelling software for the Mac?

David, VE7EZM

--
David Ryeburn
david_ryeburn@telus.netz
To send e-mail, change "netz" to "net"

396. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 11:08:54 UTC
From: Tom <abraa@cadabraa.ca>
Message-ID: <9Z0ot.11902$T62.4286@newsfe08.iad>
Source record: 19

Hi Gentlemen,
I have the two capacitors for the bottom matching coil on the Diamond X200a.
I have sanded and cleaned the old solder off the sleeve there that looks
like chromed brass.

I have tried a couple times so far to get the solder to stick to that brass.
I have tried some plumbing solder, some plumber's paste (acid flux) I
cleaned it, sanded it, filed it and it wont stick to that brass ring part at
the bottom. I tried 50/50 solder, rosin core, lead free, and another couple
types I am not sure their breakdown but they are electronic solder. Any
ideas or tips to try to get that solder to stick? I see it has a nylon
insert there of some sort. I am wondering if I am getting it hot enough, I
think I am, I am using a 250 watts gun solder type solder iron. Any ideas?
Thanks

"Jeff Liebermann" <jeffl@cruzio.com> wrote in message
news:82jio899bsak5g14cjg96h3nch4um5t73u@4ax.com...
> On Tue, 07 May 2013 11:32:57 -0700, Jeff Liebermann <jeffl@cruzio.com>
> wrote:
>
> Incidentally, you might find the modifications and analysis of the
> Diamond X510 antenna of interest:
> <http://pa0fri.home.xs4all.nl/Ant/X510N/Diamond%20X510N%20modification.htm>
> --
> Jeff Liebermann jeffl@cruzio.com
> 150 Felker St #D http://www.LearnByDestroying.com
> Santa Cruz CA 95060 http://802.11junk.com
> Skype: JeffLiebermann AE6KS 831-336-2558
>

397. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 15:52:40 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <knqmgrqcl1@dont-email.me>
Source record: 20

On 5/25/2013 1:48 AM, David Ryeburn wrote:
> In article <knnoerjri1@dont-email.me>, John S <Sophi.2@invalid.org>
> wrote:
>
>>>>> If you ran the analysis with the loop closed on those two bands, would
>>>>> you mind doing it over with the loop open?
>>>>
>>>> 7.05MHz 117.3 - J 0.2996 ohms closed loop
>>>> 3.525MHz 9.365 + J 111.4 ohms open loop
>>>> 10.125MHz 253.9 + J 60.16 ohms open loop
>>>>
>>>
>>> Those are free-space values. I forgot to put the ground in. Here they
>>> are revised for the bottom to be about 1.3m above ground...
>>>
>>> 7.05MHz 123.6 - J 0.02019 ohms closed loop
>>> 3.525MHz 13.57 + J 105.7 ohms open loop
>>> 10.125MHz 261.7 + J 14.89 ohms open loop
>>
>> And for completeness:
>>
>> 14.05MHz 265.2 + J 78.03 ohms closed loop
>> 21.15MHz 181.4 + J 286.6 ohms closed loop
>> 28.05MHz 322.6 + J 397.5 ohms closed loop
>
>
> Many thanks. That confirms what I thought, except that I had expected
> the antenna to be on the capacitive side of resonance on 30 metres. All
> the figures indicate that my 142.7 ft loop is just a bit too long.

Well, I didn't know your wanted to see the results with a 142.7 ft loop.
I thought you wanted to start with it resonant at 7.05MHz and let the
other figures fall where they may. Here it is repeated for 142.7ft.

3.525MHz 12.41 + J 59.12 ohms open
7.05MHz 116.3 - J 83.72 ohms closed
10.125MHz 244.3 - J 82.4 ohms open
14.05MHz 212.9 - J 78.4 ohms closed
21.15MHz 112 + J 33.87 ohms closed
28.05MHz 258 + J 77.07 ohms closed

398. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 19:26:12 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <pe32q8pon8j82n5ld9kgrs3bjjucv5jbpt@4ax.com>
Source record: 21

On Fri, 24 May 2013 23:48:41 -0700, David Ryeburn
<david_ryeburn@telus.netz> wrote:

>Does anyone know of
>antenna modelling software for the Mac?

<http://www.w7ay.net/site/Applications/cocoaNEC/>
--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

399. Re: Scanner antenna ???

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 19:37:48 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <5542q8h2iulgvnie82hcer55i1ejk66bhm@4ax.com>
Source record: 22

On Sat, 25 May 2013 07:08:54 -0400, "Tom" <abraa@cadabraa.ca> wrote:

>Hi Gentlemen,
>I have the two capacitors for the bottom matching coil on the Diamond X200a.
>I have sanded and cleaned the old solder off the sleeve there that looks
>like chromed brass.
>
>I have tried a couple times so far to get the solder to stick to that brass.
>I have tried some plumbing solder, some plumber's paste (acid flux) I
>cleaned it, sanded it, filed it and it wont stick to that brass ring part at
>the bottom. I tried 50/50 solder, rosin core, lead free, and another couple
>types I am not sure their breakdown but they are electronic solder. Any
>ideas or tips to try to get that solder to stick? I see it has a nylon
>insert there of some sort. I am wondering if I am getting it hot enough, I
>think I am, I am using a 250 watts gun solder type solder iron. Any ideas?
>Thanks

Your soldering gun tip isn't staying hot enough to solder anything
with a large thermal mass. Using 63/37 lead/tin solder, you need a
large chisel tip on either a thermostatically controlled soldering
iron that will get you up to about 200C. If you have a propane torch
with a copper soldering tip (used by plumbers), that will also work.
The soldering gun isn't going to work because the copper "wire" tip
doesn't have enough mass. As soon as the small tip, touches the large
brass heat sink, the temperature of the tip will drop drastically.
It's also not themostatically controlled, so you don't know what
temperature it's running. Too cold and it doesn't solder. To hot and
you vaporize the flux and produce oxidized dross. You need a tip that
will get hot, and stay hot at the correct temperature. Don't bother
trying with RoHS solder. You might try practicing with an old brass
coax connector before attacking the antenna.

--
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Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

400. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-25 23:30:02 UTC
From: David Ryeburn <david_ryeburn@telus.netz>
Message-ID: <david_ryeburn-B8FF2D.16300225052013@news.eternal-september.org>
Source record: 23

In article <knqmgrqcl1@dont-email.me>, John S <Sophi.2@invalid.org>
wrote:

> On 5/25/2013 1:48 AM, David Ryeburn wrote:

... (snip)

> > Many thanks. That confirms what I thought, except that I had expected
> > the antenna to be on the capacitive side of resonance on 30 metres. All
> > the figures indicate that my 142.7 ft loop is just a bit too long.
>
> Well, I didn't know your wanted to see the results with a 142.7 ft loop.

I thought that that would be about the resonant length for a 7.05 MHz
full-wave closed loop (1005/7.05 = 142.55). What length were you using,
for your revised figures that took into account the presence of the
ground?

> I thought you wanted to start with it resonant at 7.05MHz and let the
> other figures fall where they may. Here it is repeated for 142.7ft.
>
> 3.525MHz 12.41 + J 59.12 ohms open
> 7.05MHz 116.3 - J 83.72 ohms closed
> 10.125MHz 244.3 - J 82.4 ohms open
> 14.05MHz 212.9 - J 78.4 ohms closed
> 21.15MHz 112 + J 33.87 ohms closed
> 28.05MHz 258 + J 77.07 ohms closed

Thank you for the re-computation. These figures do make 15 and 10 better
than they were (but maybe not good enough, considering the added loss in
RG-174 at those higher frequencies). I also haven't thought about the
other two WARC bands, and I'm not particularly interested in 60 metres
where you can't QSY except in discrete steps. (And I don't think Canada
has fully implemented 60 metres for hams as yet.)

In article <pe32q8pon8j82n5ld9kgrs3bjjucv5jbpt@4ax.com>,
Jeff Liebermann <jeffl@cruzio.com> wrote:

> On Fri, 24 May 2013 23:48:41 -0700, David Ryeburn
> <david_ryeburn@telus.netz> wrote:
>
> >Does anyone know of
> >antenna modelling software for the Mac?
>
> <http://www.w7ay.net/site/Applications/cocoaNEC/>

I'll look into this one. Have you used cocoaNEC?

David, VE7EZM

--
David Ryeburn
david_ryeburn@telus.netz
To send e-mail, change "netz" to "net"

401. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-26 01:43:48 UTC
From: Jeff Liebermann <jeffl@cruzio.com>
Message-ID: <k7p2q8dg4bnt611gdn7le9u725deob95ku@4ax.com>
Source record: 24

On Sat, 25 May 2013 16:30:02 -0700, David Ryeburn
<david_ryeburn@telus.netz> wrote:

>> <http://www.w7ay.net/site/Applications/cocoaNEC/>

>I'll look into this one. Have you used cocoaNEC?
>David, VE7EZM

Yes, sorta. It was previous version running the built in NEC2, not
NEC4. It was also on an old PowerPC iMac, which I still have here
somewhere. It was interesting, but I didn't want to invest in an NEC4
license, which incidentally had doubled in price to $300 since I last
looked:
<https://ipo.llnl.gov/?q=technologies-software-browse_software-app&s=NEC>

There are plenty of models made with CocoaNEC on the web:
<https://www.google.com/search?q=cocoanec+model&tbm=isch>
Here's your Delta Loop modeled in CocoaNEC.
<http://ag1le.blogspot.com/2012/01/antenna-experiment-delta-loop-for-7-mhz.html>
(Better design through plagiarism).

Personally, I prefer 4NEC2:
<http://www.qsl.net/4nec2/>
which requires Windoze. Some of my stuff using 4NEC2:
<http://802.11junk.com/jeffl/antennas/>
I suggest you install VirtualBox on your Mac. Load Windoze XP (Not
Vista, Win7, or Win8), and use that to run 4NEC2.
<http://grok.lsu.edu/article.aspx?articleid=13602>

--
Jeff Liebermann jeffl@cruzio.com
150 Felker St #D http://www.LearnByDestroying.com
Santa Cruz CA 95060 http://802.11junk.com
Skype: JeffLiebermann AE6KS 831-336-2558

402. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-26 12:33:05 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <knsv64$rt4$1@dont-email.me>
Source record: 25

On 5/25/2013 6:30 PM, David Ryeburn wrote:
> In article <knqmgrqcl1@dont-email.me>, John S <Sophi.2@invalid.org>
> wrote:
>
>> On 5/25/2013 1:48 AM, David Ryeburn wrote:
>
> ... (snip)
>
>>> Many thanks. That confirms what I thought, except that I had expected
>>> the antenna to be on the capacitive side of resonance on 30 metres. All
>>> the figures indicate that my 142.7 ft loop is just a bit too long.
>>
>> Well, I didn't know your wanted to see the results with a 142.7 ft loop.
>
> I thought that that would be about the resonant length for a 7.05 MHz
> full-wave closed loop (1005/7.05 = 142.55). What length were you using,
> for your revised figures that took into account the presence of the
> ground?

146.555 ft

403. 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-28 11:39:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnkq95ia.6gf.gsm@cable.mendelson.com>
Source record: 26

Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
dipole phased array for tower use. I only want one.

I know it is a simple antenna to make, but in my case it is something
I have to pay someone to put up (even if it is on an awning over a balcony)
and it has to survive wind and sandstorms, direct sunlight at 3,000 feet
altitude, and 6 months of the year extremely low humidity.

I want a dipole because a beam would be too obvious and attract attention,
and I want it horizontally polarized.

Any suggestions?

TIA,

Geoff.

--
Geoffrey S. Mendelson, N3OWJ/4X1GM/KBUH7245/KBUW5379
It's Spring here in Jerusalem!!!

404. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-28 19:23:44 UTC
From: you <you@shadows.orgs>
Message-ID: <you-ED2606.11234328052013@news.starband.net>
Source record: 27

In article <slrnkq95ia.6gf.gsm@cable.mendelson.com>,
"Geoffrey S. Mendelson" <gsm@mendelson.com> wrote:

> Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
> dipole phased array for tower use. I only want one.
>
> I know it is a simple antenna to make, but in my case it is something
> I have to pay someone to put up (even if it is on an awning over a balcony)
> and it has to survive wind and sandstorms, direct sunlight at 3,000 feet
> altitude, and 6 months of the year extremely low humidity.
>
> I want a dipole because a beam would be too obvious and attract attention,
> and I want it horizontally polarized.
>
> Any suggestions?
>
> TIA,
>
> Geoff.

Do you know how to make a Yagi Driven element?

That is a Dipole...

405. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-28 21:12:11 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <ko36bd$sk4$1@dont-email.me>
Source record: 28

On 5/28/2013 2:23 PM, you wrote:
> In article <slrnkq95ia.6gf.gsm@cable.mendelson.com>,
> "Geoffrey S. Mendelson" <gsm@mendelson.com> wrote:
>
>> Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
>> dipole phased array for tower use. I only want one.
>>
>> I know it is a simple antenna to make, but in my case it is something
>> I have to pay someone to put up (even if it is on an awning over a balcony)
>> and it has to survive wind and sandstorms, direct sunlight at 3,000 feet
>> altitude, and 6 months of the year extremely low humidity.
>>
>> I want a dipole because a beam would be too obvious and attract attention,
>> and I want it horizontally polarized.
>>
>> Any suggestions?
>>
>> TIA,
>>
>> Geoff.
>
> Do you know how to make a Yagi Driven element?
>
> That is a Dipole...
>

So you did not read his post, right?

**** "I know it is a simple antenna to make, but in my case it is
something I have to pay someone to put up (even if it is on an awning
over a balcony) and it has to survive wind and sandstorms, direct
sunlight at 3,000 feet altitude, and 6 months of the year extremely low
humidity.***"

Try to answer his query rather than show your (lack of) knowledge.

Also, post your callsign, if you dare.

John
KD5YI

406. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-28 22:25:43 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <9fudnclCZIt0szjMnZ2dnUVZ_sqdnZ2d@earthlink.com>
Source record: 29

"Geoffrey S. Mendelson" <gsm@mendelson.com> wrote in message
news:slrnkq95ia.6gf.gsm@cable.mendelson.com...
> Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
> dipole phased array for tower use. I only want one.
>
> I know it is a simple antenna to make, but in my case it is something
> I have to pay someone to put up (even if it is on an awning over a
> balcony)
> and it has to survive wind and sandstorms, direct sunlight at 3,000 feet
> altitude, and 6 months of the year extremely low humidity.
>
> I want a dipole because a beam would be too obvious and attract attention,
> and I want it horizontally polarized.
>
> Any suggestions?
>
> TIA,
>
> Geoff.

Look at this horizontal loop.
http://www.aesham.com/uhf/m2-antennas-2m-ho-loop/

Very similar to a dipole and I think it is omni directional where a dipole
willbe directional.

407. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-28 23:19:38 UTC
From: Channel Jumper <Channel.Jumper.beafd88@radiobanter.com>
Message-ID: <Channel.Jumper.beafd88@radiobanter.com>
Source record: 30

John S;805445 Wrote:
> On 5/28/2013 2:23 PM, you wrote:-
> In article slrnkq95ia.6gf.gsm@cable.mendelson.com,
> "Geoffrey S. Mendelson" gsm@mendelson.com wrote:
> -
> Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
> dipole phased array for tower use. I only want one.
>
> I know it is a simple antenna to make, but in my case it is something
> I have to pay someone to put up (even if it is on an awning over a
> balcony)
> and it has to survive wind and sandstorms, direct sunlight at 3,000
> feet
> altitude, and 6 months of the year extremely low humidity.
>
> I want a dipole because a beam would be too obvious and attract
> attention,
> and I want it horizontally polarized.
>
> Any suggestions?
>
> TIA,
>
> Geoff.-
>
> Do you know how to make a Yagi Driven element?
>
> That is a Dipole...
> -
>
> So you did not read his post, right?
>
> **** "I know it is a simple antenna to make, but in my case it is
> something I have to pay someone to put up (even if it is on an awning
> over a balcony) and it has to survive wind and sandstorms, direct
> sunlight at 3,000 feet altitude, and 6 months of the year extremely low
>
> humidity.***"
>
> Try to answer his query rather than show your (lack of) knowledge.
>
> Also, post your callsign, if you dare.
>
> John

> KD5YI

John - no reason to be offensive.

The OP asked if anyone knew of a manufacturer of a dipole antenna.
Any antenna 1/2 wavelength in size can be considered a dipole antenna.
The problem with horizontal polarization is that you need to get it at least 10' above everything else in the neighborhood to get it to work.
That does not leave you with a stealth option.

Too many people moves into a house and after they move in, they say, oh and by the way - I would like to continue to practice being a ham.
To which the local housing /zoning board says NO!

So people gets all kinds of bright ideas on how to hide antenna's.
The telephone commercial for Verizon comes to mind - can you hear me now!

NO - no one that I know of makes a horizontal Dipole antenna, due to the fact that most people are too cheap to even buy a antenna these days.

The antenna I have good luck with is the Diamond V2000 - but that is probably 6' tall...
Another good vertical antenna is a Diamond X 510 - which is probably 18' long.

All you need is some plexiglass, a bunch of stainless steel screws and nuts and bolts. A couple of sections of old aluminum tube - even a elderly persons walker would probably produce enough aluminum to make a decent antenna. Or a old lawn chair.
One piece to the left, another to the right, a SO connector, some Permetex Loctite Blue RVT, a couple of pieces of copper wire and a dab of solder and a couple of ring terminals and you would have yourself a antenna.

Find someone with a antenna analyzer to adjust the length to 146.550 and you would be set.

A even better solution would be a HALO antenna or a Moxun Beam - which some people might call a Sqaulo - since it is rectangular.

ARRL antenna book is your best friend in a situation like that!

--
Channel Jumper

408. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-29 00:33:59 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <I--dnZq8Ndhn0TjMnZ2dnUVZ_oadnZ2d@earthlink.com>
Source record: 31

"you" <you@shadows.orgs> wrote in message
news:you-ED2606.11234328052013@news.starband.net...
.
>
> Do you know how to make a Yagi Driven element?
>
> That is a Dipole...

While it is a Dipole, the impedance will not be very near 50 ohms. Some Yagi driven elements can be adjusted for 50 ohms, but some can not. Also when removed from the beam, the dipole may be too short to be resonate at 2 meters.

409. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-29 00:58:50 UTC
From: tom <news4792@taring.org>
Message-ID: <HsedneFrqZNVzzjMnZ2dnUVZ_rqdnZ2d@iphouse.net>
Source record: 32

On 5/28/2013 6:39 AM, Geoffrey S. Mendelson wrote:
> Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
> dipole phased array for tower use. I only want one.
>
> I know it is a simple antenna to make, but in my case it is something
> I have to pay someone to put up (even if it is on an awning over a balcony)
> and it has to survive wind and sandstorms, direct sunlight at 3,000 feet
> altitude, and 6 months of the year extremely low humidity.
>
> I want a dipole because a beam would be too obvious and attract attention,
> and I want it horizontally polarized.
>
> Any suggestions?
>
> TIA,
>
> Geoff.
>

If you can find a PAR Electronics Omniangle loop I'd recommend that.
It's within .5 dB of omni and horizontally polarized. I believe the
design was Motorola but it ended up some other places including PAR. I
remember them calling it aperture synthesis or something like that. It
sure doesn't look like an antenna that would be omni but it's closer
than anything else I've seen. His site is still up but you can't order.

http://www.parelectronics.com/faq-omniangles.php

I have a 2m version and could send you all measurements. But the
"matchbox" is sealed and I'm not going to cut it open. It may be only a
choke because it does state that a balun is part of it.

Unfortunately part of his antenna business was taken over when he
retired (?) but the Omniangles are no longer manufactured. You might be
able to find a used one. They were made for HF through 432 or maybe 1296.

tom
K0TAR

410. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-29 22:17:30 UTC
From: Fred McKenzie <fmmck@aol.com>
Message-ID: <fmmck-972D1A.18172929052013@5ad64b5e.bb.sky.com>
Source record: 33

In article <9fudnclCZIt0szjMnZ2dnUVZ_sqdnZ2d@earthlink.com>,
"Ralph Mowery" <rmowery28146@earthlink.net> wrote:

> "Geoffrey S. Mendelson" <gsm@mendelson.com> wrote in message
> news:slrnkq95ia.6gf.gsm@cable.mendelson.com...
> > Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
> > dipole phased array for tower use. I only want one.
> >
> > I know it is a simple antenna to make, but in my case it is something
> > I have to pay someone to put up (even if it is on an awning over a
> > balcony)
> > and it has to survive wind and sandstorms, direct sunlight at 3,000 feet
> > altitude, and 6 months of the year extremely low humidity.
> >
> > I want a dipole because a beam would be too obvious and attract attention,
> > and I want it horizontally polarized.
> >
> > Any suggestions?
> >
> > TIA,
> >
> > Geoff.
>
> Look at this horizontal loop.
> http://www.aesham.com/uhf/m2-antennas-2m-ho-loop/
>
> Very similar to a dipole and I think it is omni directional where a dipole
> willbe directional.

Goeff-

Ralph's suggestion appears to the best so far.

Another approach might be to use one of those "Make a dipole out of a
pair of mobile whips" adapters, but you would still need to find quarter
wave whips. In other words, it is not a "commercial dipole"

One problem you are faced with, is that the dipole needs to be in the
clear, and therefore may be too obvious for your needs. It may not work
very well if it is on an awning with a metal frame.

Speaking of metal frames, one stealth antenna might be the awning frame
itself, if you can find a way to match it to your feedline. Perhaps a
gamma match would work at the midpoint of a horizontal portion. Again,
not a "commercial dipole"!

Fred
K4DII

411. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-05-30 00:08:03 UTC
From: Bob <rmiller47@satx.rr.com>
Message-ID: <5r5dq85u8rr416pai87sc09sq73uttvb90@4ax.com>
Source record: 34
Body handling: HTML body converted to readable text

On Tue, 21 May 2013 13:00:02 -0700, David Ryeburn
wrote:

>In article ,
> "Irv Finkleman" wrote:
>
>> ... I haven't seen a new post in 8 days!
>...
>> I like it when there's lots of activity on a good discussion
>
>OK. Here's a question for someone who likes to model things.
>
>I'll soon (if Industry Canada gets around to processing the exam which I
>passed) be VE7??? and I'd like to go backpacking with a QRP CW
>transceiver. I want to use a current balun at the antenna and RG-174
>feedline because I've got a pacemaker inside me (else I'd just use an
>end-fed halfwave). I'd prefer to have a single antenna I can use on
>multiple bands.
>
>Suppose I built a triangular closed loop one full wave long on 40
>metres, with sides about 14.5 m long (whatever it takes to be resonant
>on the low end of 40). I'd stretch one 14.5 m side between high branches
>of two tall conifers at my camp and the other two sides would slope
>downward and toward each other, meeting maybe 1 m above ground where
>they'd be connected to each other, with thin rope continuing from that
>junction point on down to a stake. I'd want to use this on 40, 20, 15,
>and 10, and if I went out to the back where the two down-sloping wires
>were connected together and disconnected them I'd then have an open loop
>which would be a little long for a half-wave on 80 and more than a
>little long for three half-waves on 30. What sorts of impedances would
>the poor balun be subjected to on the various bands?
>
>I'm not that worried about the SWR on the feedline or the impedance at
>the transmitter; the latter can be dealt with by using an antenna tuner.
>But if the balun is subjected to a load impedance that's too high or too
>reactive, maybe it won't do its job well enough and some current will
>come down the outside of the coax. My pacemaker might not like that.

There was a story on the TV news tonight. Ipads have small magnets in
them. If you go to sleep with your Ipad resting on your chest, the
magnets have been knows to interfere with pacemakers.

Antennas, tho', I dunno...

bob
k5qwg

>
>David, ex-W8EZE 45 years ago and soon to be a VE7

412. Crossposting Permitted to rec.radio.amateur.moderated

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-01 06:00:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/moderated/crossposting-1-1370066400@panix.com>
Source record: 35
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/moderated/crossposting
Revision: 1.2 2011/11/02 04:08:53
Posting-Frequency: posted quarterly
URL: http://www.panix.com/~rram/usenet/rram/index.html

Changes followed by "|".

After a 30-day public discussion and feedback period to gauge reader
opinions in March of 2009:

http://groups.google.com/group/rec.radio.amateur.moderated/browse_thread/thread/d7d337db35
f23326

the rec.radio.amateur.moderated Moderation Team had decided to consider |
amending its charter, and permit limited simultaneous crossposting to
rec.radio.amateur.moderated and one other unmoderated
amateur-radio-related discussion newsgroup. After a successful trial |
period (90 days, through early July 2009), we decided to adopt this |
change permanently. |

Approved rec.radio.amateur.* newsgroups are those that are currently
listed in the latest version of the "List of Big Eight Newsgroups" which
is crossposted monthly to news.announce.newgroups, news.groups, and
news.lists.misc.

Approved alt.radio.amateur.* and alt.ham-radio.* newsgroups are those
that have been created consistent with the suggestions in "So You Want
to Create an Alt Newsgroup" at:

http://www.faqs.org/faqs/alt-creation-guide/

Approved regional hierarchy newsgroups are those that contain either
"radio.amateur" or "ham-radio" in their names, including
uk.radio.amateur and aus.radio.amateur.misc.

We will make every reasonable effort to keep our list of approved
newsgroups up-to-date. In case we have overlooked any, and a submission
is rejected in error as a result, the rejected submitter can E-mail us
at our administrative contact address (in the signature at the bottom of
this article, and the default Reply-To for the rejection message)
requesting that it be added, and that the article be approved. We may
still choose to reject articles crossposted to any alt.* newsgroup with
an inappropriate name, including obscene language, embedded
name-calling, or encouragement of unlawful conduct.
```

Please direct any comments, questions, or criticisms to
rec-radio-amateur-moderated-request@panix.com.

413. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-05 10:30:47 UTC
From: Robert Smits <bob@rsmits.ca>
Message-ID: <36qdnQ0ZsqVa6DLMnZ2dnUVZ_hadnZ2d@giganews.com>
Source record: 36

Geoffrey S. Mendelson wrote:

> Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
> dipole phased array for tower use. I only want one.
>
> I know it is a simple antenna to make, but in my case it is something
> I have to pay someone to put up (even if it is on an awning over a
> balcony) and it has to survive wind and sandstorms, direct sunlight at
> 3,000 feet altitude, and 6 months of the year extremely low humidity.
>
> I want a dipole because a beam would be too obvious and attract attention,
> and I want it horizontally polarized.
>
> Any suggestions?
>
> TIA,
>
> Geoff.
>

Try Sinclair Antennas, Geoff =- they specialize in commercial antennas,
duplexers, etc. Google them under Sinclair Antennas Canada and they show
up.

414. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-05 19:31:36 UTC
From: K7JEB <k7jeb.jim@gmail.com>
Message-ID: <0962406d-dcb1-4663-aa66-f167e4e8807e@googlegroups.com>
Source record: 37

On Tuesday, May 28, 2013 4:39:04 AM UTC-7, Geoffrey S. Mendelson wrote:
> Does anyone know of a 2m commerical dipole?

If you want an excellent commercial product,
there's Kreco antennas:

http://www.krecoantennas.com/hbcaxial.htm

It will be the last two-meter omni you'll have to buy.

Jim, K7JEB

415. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-05 19:37:12 UTC
From: K7JEB <k7jeb.jim@gmail.com>
Message-ID: <4838d515-b2f1-4168-8809-2f66e224b27a@googlegroups.com>
Source record: 38

I wrote:
> If you want an excellent commercial product,
> there's Kreco antennas

Unfortunately, I didn't read the requirement
for horizontal polarization... Sorry about that!
K7JEB

416. Re: 2 meter commercial dipole.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-05 20:04:55 UTC
From: John S <Sophi.2@invalid.org>
Message-ID: <koo5cn$9gc$1@dont-email.me>
Source record: 39

On 5/28/2013 6:39 AM, Geoffrey S. Mendelson wrote:
> Does anyone know of a 2m commerical dipole? Cushcraft used to make a 4
> dipole phased array for tower use. I only want one.
>
> I know it is a simple antenna to make, but in my case it is something
> I have to pay someone to put up (even if it is on an awning over a balcony)
> and it has to survive wind and sandstorms, direct sunlight at 3,000 feet
> altitude, and 6 months of the year extremely low humidity.
>
> I want a dipole because a beam would be too obvious and attract attention,
> and I want it horizontally polarized.
>
> Any suggestions?
>
> TIA,
>
> Geoff.
>

Hi, Geoff -

Maybe you could have your installer mount this dipole horizontally.

http://tinyurl.com/mv6cb2c

Cheers,
John

417. 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-06 13:34:04 UTC
From: "Geoffrey S. Mendelson" <gsm@mendelson.com>
Message-ID: <slrnkr13s2.3kq.gsm@cable.mendelson.com>
Source record: 40

Take a length of 300 ohm twinlead. Short the far end, End feed one side of the close end, and leave the other side disconnected.

What do I have?

I know if I short both ends, I have a wide(er) bandwidth end fed random wire.

Is it still an end fed random wire with an electrical length of twice its physical length?

Something completely different?

If for example, if I have 10 meters of space, and hang it, will I have a 20 meter long random wire, which would sort of be a 40 meter band 1/2 wave end fed antenna? Or would I have an odd 10 meter long end fed antenna (for 20m?)

Can it be switched between the two by adding a shorting switch at the close end? Open it would be for 40m, and closed for 20?

TIA,

Geoff.

--
Geoffrey S. Mendelson, N3OWJ/4X1GM/KBUH7245/KBUW5379
It's Spring here in Jerusalem!!!

418. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-06 14:04:39 UTC
From: W5DXP <w5dxp@hotmail.com>
Message-ID: <cf2bd581-e2b3-4872-a255-3012a13a46cc@googlegroups.com>
Source record: 41

On Thursday, June 6, 2013 8:34:04 AM UTC-5, Geoffrey S. Mendelson wrote:
> What do I have?

http://en.wikipedia.org/wiki/Folded_unipole_antenna
--
73, Cecil, w5dxp.com

419. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-06 21:18:09 UTC
From: Channel Jumper <Channel.Jumper.bf6bee8@radiobanter.com>
Message-ID: <Channel.Jumper.bf6bee8@radiobanter.com>
Source record: 42

```
Geoffrey S. Mendelson;805681 Wrote:
> Take a length of 300 ohm twinlead. Short the far end, End feed one side
> of
> the close end, and leave the other side disconnected.
>
> What do I have?
>
> I know if I short both ends, I have a wide(er) bandwidth end fed random
> wire.
>
> Is it still an end fed random wire with an electrical length of twice
> its
> physical length?
>
> Something completely different?
>
> If for example, if I have 10 meters of space, and hang it, will I have
> a 20 meter long random wire, which would sort of be a 40 meter band
> 1/2 wave end fed antenna? Or would I have an odd 10 meter long end
> fed antenna (for 20m?)
>
> Can it be switched between the two by adding a shorting switch at the
> close
> end? Open it would be for 40m, and closed for 20?
>
> TIA,
>
> Geoff.
>
>
> --
> Geoffrey S. Mendelson, N3OWJ/4X1GM/KBUH7245/KBUW5379
> It's Spring here in Jerusalem!!!

Get yourself a ARRL antenna book

--
Channel Jumper
```

420. Re: Backpacking antenna question (Was: Test)

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-07 00:54:54 UTC
From: "J. C. Mc Laughlin" <JCM@LenTel.Com>
Message-ID: <WuedncOM-rH8sizMnZ2dnUVZ_qCdnZ2d@bright.net>
Source record: 43

Dear David: Delighted that you are back in the game! Love your new call.
1. I have run EZNEC 5+ on a micro computer that uses Atom uP and MS XP OS. That computer cost about $350. Even less expensive devices exist. The computer I have can be coupled into projector (VGA) so that I can give presentations. Pont is: Since you enjoy using math and NEC, do consider the incremental cost of a minimal computer. Of course, I have a dedicated computer (not ever connected to the Internet) where I do serious work much more quickly than with the little fellow.

2. With the exception of 28 MHz (where you might wish to consider a conventional 0.5WL dipole), I estimate that five turns of RG 174 around a big Type 31 core will cool most of the outside-of-the-coax current. You might have the mechanical conditions to allow two or three turns through a small Type 31 right at the feed point.

3. When younger, I used extensive amounts of RG174 for invisible antennas. It is possible to damage the coax, though it is strong enough to use as a garrote.

Again, it is delightful to have you back in action. 73 Mac N8TT

David, VE7EZM

--
David Ryeburn

J. C. Mc Laughlin
Michigan U.S.A.
Home: JCM@LenTel.Com
(Note domain change)

421. Seeking New FAQ/Intro Maintainers for rec.radio.amateur.*

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-07 06:05:01 UTC
From: rram@panix.com
Message-ID: <radio/ham-radio/recruitment-1-1370585100@panix.com>
Source record: 44
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.info

```
Posted-By: auto-faq 3.3.2 beta (PGPMoose V2.0, Perl 5.005)
Archive-name: radio/ham-radio/recruitment
Revision: 1.2 2009/11/25 14:41:01
Posting-Frequency: posted quarterly
URL: http://www.faqs.org/faqs/radio/personal-intro/

Changes followed by "|".

The rec.radio.info newsgroup, first established in 1993, has been
recently revived by an active moderation team. We are currently seeking
suitable information, FAQ, and bulletin articles from the entire
rec.radio.* newsgroup hierarchy for simultaneous cross-posting to our
newsgroup.

We are seeking a replacement maintainer for the following information
bulletin formerly posted to rec.radio.amateur.* (and currently archived
at http://www.faqs.org/faqs/radio/personal-intro/ ):

radio/personal-intro
Subject: Guide to the rec.radio Newsgroups
Maintainer: jeffreyh@Hawaii.Edu (Jeffrey Herman)
Last Posted: 9 Nov 2001 06:18:17 GMT
Posting-Frequency: 15th of each month

One significant omission, requiring immediate updates, for this article |
is that it does not mention newer amateur radio newsgroups created since |
it was written, including: |

rec.radio.amateur.antenna |
rec.radio.amateur.boatanchors |
rec.radio.amateur.dx |
rec.radio.amateur.equipment |
rec.radio.amateur.homebrew |
rec.radio.amateur.moderated |
rec.radio.amateur.space |

We are willing to provide any technical support necessary to get this
article updated and automatically posted again at a regular interval.
This would include establishing contact with the original maintainer for
any necessary permissions. We would prefer to seek a new, dedicated
maintainer at this time, rather than start auto-posting the original
article ourselves.

For more information about our newsgroup, see:
```

http://www.panix.com/~rram/usenet/rri/index.html

Please direct any comments, questions, or criticisms to
rec-radio-info-request@panix.com.

422. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-07 21:42:13 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <eiw+zxT1OlsRFwOI@g3ohx.demon.co.uk>
Source record: 45

In message <cf2bd581-e2b3-4872-a255-3012a13a46cc@googlegroups.com>,
W5DXP <w5dxp@hotmail.com> writes
>On Thursday, June 6, 2013 8:34:04 AM UTC-5, Geoffrey S. Mendelson wrote:
>> What do I have?
>
>http://en.wikipedia.org/wiki/Folded_unipole_antenna
>--
>73, Cecil, w5dxp.com

I think what Geoff is describing is not the usual folded unipole (twin
feeder shorted at the top, and at the bottom, one side fed from the TX,
and the other side grounded and/or connected to radials), but rather
twin feeder where the top end is shorted, and at the bottom, one side is
fed from the TX, and the other side is open circuit.
--
Ian

423. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-08 15:01:13 UTC
From: W5DXP <w5dxp@hotmail.com>
Message-ID: <aedbf7fe-1f06-4283-82e4-cef9640a4852@googlegroups.com>
Source record: 46

On Friday, June 7, 2013 4:42:13 PM UTC-5, Ian Jackson wrote:
> ... one side is fed from the TX, and the other side is open circuit.

The 1/4WL folded monopole is resonant with a feedpoint impedance around three times a 1/4WL single-wire monopole. Those two antennas have approximately the same gain.

If one disconnects the folded element's ground connection leaving an open-circuit, the feedpoint reactance becomes extremely high and the antenna loses about 6dB of gain compared to the standard 1/4WL monopole. It looks more like a 1/4WL shorted stub than an antenna.

424. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-08 16:00:41 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <K237GIDpU1sRFwNs@g3ohx.demon.co.uk>
Source record: 47

In message <aedbf7fe-1f06-4283-82e4-cef9640a4852@googlegroups.com>,
W5DXP <w5dxp@hotmail.com> writes
>On Friday, June 7, 2013 4:42:13 PM UTC-5, Ian Jackson wrote:
>> ... one side is fed from the TX, and the other side is open circuit.
>
>The 1/4WL folded monopole is resonant with a feedpoint impedance around
>three times a 1/4WL single-wire monopole. Those two antennas have
>approximately the same gain.
>
>If one disconnects the folded element's ground connection leaving an
>open-circuit, the feedpoint reactance becomes extremely high and the
>antenna loses about 6dB of gain compared to the standard 1/4WL
>monopole. It looks more like a 1/4WL shorted stub than an antenna.

I thought something like that would happen. However, because of the
close coupling between them, you might instinctively think that the two
conductors would still simply act as a single conductor, and the feed
impedance would be low (more like a non-folded monopole).

Can't you make a trapped dipole (or whatever) using 300 twin for each
leg, but with sections of one conductor cut out so you form a succession
of 1/4WL shorted stubs (of various lengths) in series, acting as traps
on the various HF bands?
--
Ian

425. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-08 16:14:37 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <JLIst.20260$6_4.4413@newsfe31.iad>
Source record: 48

You are thinking about the Lattin Antenna -- there's
lots of info available on the net for it. Instead of a dipole,
you could use one half the dipole as a vertical

Irv VE6BP

"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
news:K237GIDpU1sRFwNs@g3ohx.demon.co.uk...
> In message <aedbf7fe-1f06-4283-82e4-cef9640a4852@googlegroups.com>, W5DXP
> <w5dxp@hotmail.com> writes
>>On Friday, June 7, 2013 4:42:13 PM UTC-5, Ian Jackson wrote:
>>> ... one side is fed from the TX, and the other side is open circuit.
>>
>>The 1/4WL folded monopole is resonant with a feedpoint impedance around
>>three times a 1/4WL single-wire monopole. Those two antennas have
>>approximately the same gain.
>>
>>If one disconnects the folded element's ground connection leaving an
>>open-circuit, the feedpoint reactance becomes extremely high and the
>>antenna loses about 6dB of gain compared to the standard 1/4WL monopole.
>>It looks more like a 1/4WL shorted stub than an antenna.
>
> I thought something like that would happen. However, because of the close
> coupling between them, you might instinctively think that the two
> conductors would still simply act as a single conductor, and the feed
> impedance would be low (more like a non-folded monopole).
>
> Can't you make a trapped dipole (or whatever) using 300 twin for each leg,
> but with sections of one conductor cut out so you form a succession of
> 1/4WL shorted stubs (of various lengths) in series, acting as traps on the
> various HF bands?
> --
> Ian
>

426. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-08 18:57:47 UTC
From: Ian Jackson <ianREMOVETHISjackson@g3ohx.demon.co.uk>
Message-ID: <$UnWOkCr63sRFwpb@g3ohx.demon.co.uk>
Source record: 49

```
In message <JLIst.20260$6_4.4413@newsfe31.iad>, Irv Finkleman
<finkirv@shaw.ca> writes
>"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
>news:K237GIDpU1sRFwNs@g3ohx.demon.co.uk...
>> In message <aedbf7fe-1f06-4283-82e4-cef9640a4852@googlegroups.com>, W5DXP
>> <w5dxp@hotmail.com> writes
>>>On Friday, June 7, 2013 4:42:13 PM UTC-5, Ian Jackson wrote:
>>>> ... one side is fed from the TX, and the other side is open circuit.
>>>
>>>The 1/4WL folded monopole is resonant with a feedpoint impedance around
>>>three times a 1/4WL single-wire monopole. Those two antennas have
>>>approximately the same gain.
>>>
>>>If one disconnects the folded element's ground connection leaving an
>>>open-circuit, the feedpoint reactance becomes extremely high and the
>>>antenna loses about 6dB of gain compared to the standard 1/4WL monopole.
>>>It looks more like a 1/4WL shorted stub than an antenna.
>>
>> I thought something like that would happen. However, because of the close
>> coupling between them, you might instinctively think that the two
>> conductors would still simply act as a single conductor, and the feed
>> impedance would be low (more like a non-folded monopole).
>>
>> Can't you make a trapped dipole (or whatever) using 300 twin for each leg,
>> but with sections of one conductor cut out so you form a succession of
>> 1/4WL shorted stubs (of various lengths) in series, acting as traps on the
>> various HF bands?
>> --
>You are thinking about the Lattin Antenna -- there's
>lots of info available on the net for it. Instead of a dipole,
>you could use one half the dipole as a vertical
>
>Irv VE6BP

Yup. That's the one. Thanks.
--
Ian
```

427. Re: 300 ohm twinlead antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2013-06-15 19:22:08 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <y93vt.12714$Bl5.2209@newsfe30.iad>
Source record: 50

If the twin-lead portion is lambda/4 x Velocity factor,
and you add sufficient wire to the end to extend the
total length to lambda/4 you will find it gives a
reasonably good match to 52ohm coax. I built one
once. It went halfway up my tower and was then folded off at an angle and
the top end tied to to a fence.
It was cut for 75M and was a remarkable performer.

A chum of mine who DXes the low bands put one
up and really liked it. The antenna is described in Bill
Orr's book "All About Vertical Antennas".

Irv VE6BP

"Ian Jackson" <ianREMOVETHISjackson@g3ohx.demon.co.uk> wrote in message
news:eiw+zxT1OlsRFwOl@g3ohx.demon.co.uk...
> In message <cf2bd581-e2b3-4872-a255-3012a13a46cc@googlegroups.com>, W5DXP
> <w5dxp@hotmail.com> writes
>>On Thursday, June 6, 2013 8:34:04 AM UTC-5, Geoffrey S. Mendelson wrote:
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>>http://en.wikipedia.org/wiki/Folded_unipole_antenna
>>--
>>73, Cecil, w5dxp.com
>
> I think what Geoff is describing is not the usual folded unipole (twin
> feeder shorted at the top, and at the bottom, one side fed from the TX,
> and the other side grounded and/or connected to radials), but rather twin
> feeder where the top end is shorted, and at the bottom, one side is fed
> from the TX, and the other side is open circuit.
> --
> Ian
>